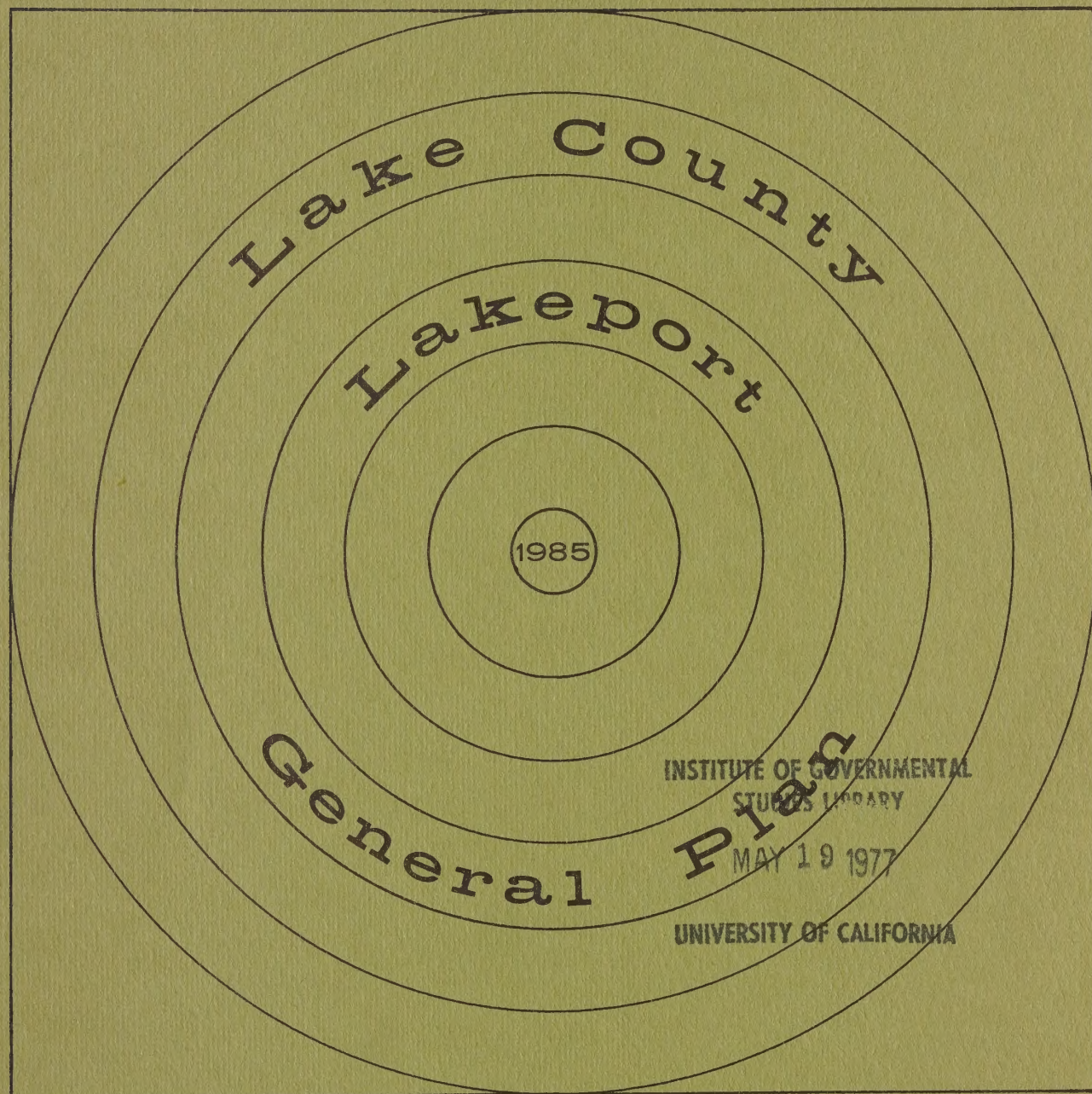


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Open Space
Conservation
Element



THE OPEN SPACE & CONSERVATION ELEMENTS

OF THE

GENERAL PLAN

LAKE COUNTY, CALIFORNIA

Adopted August 14, 1973

Board of Supervisors

[Lake County, California]

County pl.
Land Util
Conservation

Lake Co.
" "
" "

L Hahn, Wise & Associates, Inc.
Planning Consultants

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LAKE COUNTY
OPEN SPACE & CONSERVATION ELEMENTS

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PHILOSOPHY OF THE OPEN SPACE & CONSERVATION ELEMENTS
OF THE GENERAL PLAN

These Elements propose to set guidelines for the development of and conservation of Open Space, Natural Resources, Wildlife Habitat and Wetlands for the next two decades. The term General Plan means what it infers - general with approximate locations, boundaries and sizes. The Plan is long range and amendable.

It is not the intent of the Plan to imply that areas not shown in permanent open space must be sacrificed to development when found, through close inspection, to have open space or community value. The intent of the Plan is to maintain the natural topography, vegetation and scenic beauty of the area as far as possible. These areas should also be treated in a sensitive manner where appropriate.

Equally important is the fact that permanent open space designations are neither finite or all inclusive. Development may be permitted where it relates to, is compatible with, and provides the best means for safeguarding these values.

It is not the intent of this Plan to imply that areas shown as permanent open space are to be confiscated. They must either be purchased or traded for density in another location or some other valid consideration.

PART 1

THE OPEN SPACE ELEMENT

of the

GENERAL PLAN

LAKE COUNTY, CALIFORNIA

OPEN SPACE STUDY

LAKE COUNTY

I. SUMMARY and OBJECTIVES

Preservation of Open Space is not a new subject in Lake County. Agricultural land has been protected by zoning since 1968. The existing Lake County General Plan adopted in 1967 includes a recreation element which sets out open space as well as active and passive recreation areas.

Agricultural lands supply a great source of income in Lake County. It is imperative that this source of income be protected. The first objective of this open space element is, therefore: to preserve and protect the prime and productive agricultural lands and the agricultural economy of Lake County.

Recreational land is also an important amenity of Lake County. Naturally endowed with mountains, rivers and lakes these have become a recreational asset that is priceless. The prime objective in the preservation of open space is: reserve land for recreational facilities, encourage private recreational development and other open uses in catagories characteristic and beneficial to the residents, present and future, of Lake County as well as to meet the tourist needs of today and in the future.

An environment which includes a variety of wildlife is an enjoyable place to live. Preservation of habitat is the key to abundance and well being of all fish and wildlife species. The objective of this section is therefore: to preserve and maintain open space as a means of providing natural habitat for all species of wildlife.

The existing Lake County General Plan includes a plan for proposed scenic highways and a recreation element both of which recognize the importance of maintaining the scenic beauty of Lake County. Unfortunately many of the human activities along the shoreline of the lakes and streams as well as the mountainsides are detrimental to the environment. The objective of this section then becomes: Protection and conservation of the lakes and streams and mountain environment. Although agriculture is an important primary resource of the County there are other natural resources such as an important potential source of geothermal power, carbon dioxide gas, chromite, manganese, quicksilver, soda and sulphur. The County also has a large supply of coniferous and hardwood timber distributed throughout the County on both public and private lands. Marketable timber types are found above 2,000 feet. Harvesting of many of these is and will be detrimental to the scenic beauty of the County and must only be accomplished with great care. The objective of this section is: Protect the scenic natural resources of Lake County and preserve areas which are important as commercial natural resources for future generations.

Scenic lands are a prized asset to Lake County. The vast variety of scenic interests are the principle attractions to tourists and second home residences and are, therefore, a commercial asset. A prime objective of the County is: To conserve, preserve, protect and maintain the scenic lands of Lake County.

Water supply and water retention are necessities in an agricultural economy. It is also a necessity if the increase in second home and tourist population is to be provided for. The history of Lake County revolves around water; the county's very economy was largely developed because of the waters of Clear Lake for the recreational potential it produced. The people of Lake County have not, up to this time developed adequate water to protect the future economy and amenities that make the county area a desirable place in which to live. At present there are 3 reservoirs on Lake County watersheds; namely, Clear Lake, Lake Berryessa and Lake Pillsbury. Lake Berryessa being fed by Putah Creek. The prime purpose of these reservoirs is to conserve water for future use. Continual care must be taken to protect open space lands that are also valuable watershed areas. This objective of the open space element is: to preserve the quality of the existing water supply in Lake County and adequately plan for the expansion and retention of valuable water supplies for agriculture needs and future generations.

The open space plan is a compilation of the foregoing statements reflecting existing conditions and the objectives of the county to preserve and protect open space.

There are a number of ways to implement the plan - some of which are being utilized by Lake County with good results. These methods of implementation are:

Zoning - exclusive agriculture zoning has resulted in over 3.8% of the county protected for this type of open space.

Flood plain zoning: primary and secondary flood plain districts.

Subdivision regulations which allow open space through:
optional design types of development
recreational facilities or in-lieu fees.

Recreation Plan: A plan for preserving open space through active and passive recreation areas maintained by the federal, state and local government.

Private open space development - Developers have been encouraged to add to usable open space in Lake County through the use of land for golf courses, hunting preserves, private campgrounds and other such uses which add to the recreational opportunities of the county.

Other open space implementation possibilities are:

public land ownership and control
scenic easements
scenic conservation districts
design control districts
scenic highway zoning

There are also a number of methods of financing open space such as: taxation through user fees and taxes, motel "bed" tax, real estate transfer tax, house tax, gasoline tax.

Federal funds - HUD open space grants, land and water conservation fund and wildlife restoration fund.

Private funds - Private conservation organizations such as Nature Conservancy and philanthropic individuals.

VICINITY MAP



II. OPEN SPACE GENERAL

A. State Open Space Requirements

The Government Code of California clearly sets forth the intent of the Legislature in adopting open space requirements. Section 65561 reads as follows:

"The Legislature finds and declares as follows:

- (a) That the preservation of open-space land, as defined in this article, is necessary not only for the maintenance of the economy of the state, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources.
- (b) That discouraging premature and unnecessary conversion of open space land to urban uses is a matter of public interest and will be of benefit to urban dwellers because it will discourage noncontiguous development patterns which unnecessarily increase the cost of community services to community residents.
- (c) That the anticipated increase in the population of the state demands that cities, counties, and the state at the earliest possible date make definite plans for the preservation of valuable open space

land and take positive action to carry out such plans by the adoption and strict administration of laws, ordinances, rules and regulations as authorized by this chapter or by other appropriate methods.

(d) That in order to assure that the interests of all its people are met in the orderly growth and development of the State and the preservation and conservation of its resources, it is necessary to provide for the development by the State, regional agencies, counties and cities, including charter cities, of State-wide coordinated plans for the conservation and preservation of open space lands.

(e) That for these reasons this article is necessary for the promotion of the general welfare and for the protection of the public interest in open space land."

B. Other State Laws Related to Open Space

There are currently several other laws which are directly related to the preservation and protection of open space lands. They are as follows:

1. Section 65302 (d), Government Code

Each general plan shall include "a conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic forces, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals and

other natural resources."

2. Section 11546, Business and Professions Code

"The governing bodies of a city or county may by ordinance require the dedication of land, the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a final subdivision map..."

3. Land Conservation Act (Williamson Act)

Article XXVIII of the State Constitution now permits farmlands, lands within scenic highway corridors, wildlife habitat areas, timberlands, salt ponds, managed wetland areas, and submerged areas to be assessed on the basis of actual use (capitalized value), rather than on sales of comparable properties which in many instances reflect their potential value for possible urban development. As a condition for qualifying for this tax relief, which is essentially a stabilization of property taxes, the land must be restricted in one of two ways. The owner must enter into a contract, as specified in the Williamson Act, to maintain his land in agricultural use for a specified term, 10 years in Lake County, or he must grant an open space easement.

4. Open Space Subvention Act

Section 14112 of the Open Space Subvention Act, Title 14, provides for subventions to counties which have open space agreements on private property and have adopted an open space plan and ordinance.

The Secretary of the Resources Agency of the State is the final judge on whether non-prime lands devoted to open space is of State-wide significance.

The minimum length of any agreement must be ten years and must be designated for open space use in the open space plan and be of State-wide significance to be eligible for payment. These include areas of outstanding scientific, scenic or recreation value and areas to preserve wildlife and fish habitat; forest areas of importance to provide food and fiber, hazard areas; areas serving as connecting links between major recreation areas, such as electric or gas utility easements; and areas of historic interest.

C. The Need for Open Space

Open Space means many things to many people but in Lake County it usually means the things the individual like about the County when he chose it as a place to live either permanently or as a second home.

Open Space means:

The broad expanse of Clear Lake with its 43,000 surface acres.

Mountain lakes and streams.

Mountains and foothills to hike in.

Enough parks and beaches so that everyone can enjoy recreation outdoors, close to home, but with very real possibility of having to make a reservation in the future.

Farm lands, vineyards, and grazing lands continuing in agricultural productivity.

Green space separating one community from another so that you can find the countryside without driving for hours through urban traffic.

Preserving open space means creating the kind of county most people want in the year 1990, 2000 or even 2020.

D. Obstacles to Open Space

Today, the flow from metropolitan areas to the more rural counties, technological advancement and certain governmental policies place open space land in jeopardy. Listed below are some of the more urgent obstacles to open space facing Lake County.

1. Urban Sprawl

The population of Lake County was 19,548 in 1970 with a projected population of 36,000 by 1990. These numbers are not significant unless they are related to the location of these new residents and the services they will require. It is also important to recognize the large second home population which travels to Lake County during the summer months. The estimated outdoor activity days are approximately 1,500,000. It is projected that there will be well over 5,000,000 activity days by the year 1990.

Stated in general terms, virtually all new residential development for permanent residence will occur around and in close proximity to existing urban areas. Second home development has been allowed to sprawl throughout the entire county. Farm lands and forest areas throughout the

county will be under tremendous pressure to give way to the demand of this second home type development. More and more of our valuable woodland, farmland and other open space will be taken away from the county. This growth cannot be completely stopped, but specific open space provisions can give direction to its type of development and also allow for the aesthetic amenities which give release to typical urban, suburban sprawl.

2. The Automobile

This luxury termed necessity has given the American his greatest freedom and mobility, but has also caused several of today's most serious problems. The automobile and its necessary transportation network requires great amounts of land. (It is estimated that in Los Angeles 50 to 60% of the total land area is paved). The auto is a primary air polluter and generates large scale noise pollution when measured near highways and freeways. Ugly scars are left as remainders of new roadways and barren and virgin country. High traffic volumes in tourist oriented areas virtually eliminate many of the pleasures which originally made the county so popular. In this case, the automobile can be controlled, not through the numbers produced, but through the sophistication of the transportation networks they require. Automobile access should be based on the intensity of use desired, therefore, controlling the automobile by the scale and condition of the roadway. To accomplish this requires close coordination and intergration of all elements of the General Plan, particularly the open space and transportation element.

3. Land for Parks and Recreation

Although providing parks is basically a problem for urban communities, a comprehensive park network should be maintained to supplement the federal, state and county system in Lake County. Urban parks or open space can provide a feeling of visual relief as well as an area for active play and cultural experience. It also provides for community identity. Size and scale of these parks is not definitive and are difficult to standardize. The rule in the urban parks should be focused on accessibility and usage. In the communities, a vacant lot is enough to kindle the creative activity of a child. A bicycle trail is ample daily activity for many senior citizens. And it must be remembered that many times these are the people who need and appreciate the exposure to open space.

4. Land Taxation

The matter of cost of preservation or acquisition of open space is usually a burden that must be assumed by the property owner in the community. The property owner is the one individual who provides the money for the bulk of county services and any additional tax increases for open space is becoming increasingly unrealistic. Our traditional form of utilizing property tax funds for land acquisition is becoming limited. New methods of equitable taxation must be explored including federal and state assistance in grant form resulting from new priorities placed upon the income taxing system. It is true that most people pay taxes and most people appreciate the need for open space, but most property owners will not appreciate additional taxes for provision of open space. New funding sources must be developed so as not to place any additional burden on the tax payer.

5. Jurisdictional Confusion

Many open space conflicts occur between jurisdictions and governmental agencies. The responsibility for certain lands often create confusion between the city, county, state and federal governments. Different departments within the same agency often operate under different policy on the same issue. The California Planning and Conservation Law is continually being updated and expanded, making many documents and planning literature ineffective. New issues are being added to Planning Commission responsibility and necessitate careful programming to assure that planning remain comprehensive without needless overlap or duplication.

E. Coordination With Other Counties

It is necessary for the effective implementation of an open space element that Lake County coordinate its planning decisions with bordering counties so as to eliminate any conflicting proposals on land uses close to the county line. Lake County is bordered by Mendocino County, Glen County, Colusa County, Yolo County, Napa County and Sonoma County. The county boundaries of Mendocino have the greatest boundary exposure with Lake County and open space elements by all counties should be studied and analyzed for adequate consideration within this report.

There will be differences in the interpretation of what is to be included in an open space element. But because of overlapping types of landscapes and land uses, the proposals made in the surrounding county's open space elements are consistent with the projections set forth in Lake County open space element.

Minor differences will occur where two jurisdictions make proposals on similar land areas, but what is important is that the fundamental theme of all contiguous plans remain consistent.

F. Coordination Between the City and County

Although county government is responsible for all unincorporated lands, it should also be its responsibility to serve as a recommending and coordinating body in open space matters establishing urban patterns related to the City of Lakeport. The City will ultimately establish its own Plan but close coordination between City and County will result in a framework of harmonious recommendations close to and around Lakeport corporate limits.

III. OPEN SPACE CONSIDERATIONS, LAKE COUNTY

The following open space considerations were researched and analyzed as a basic foundation upon which the Open Space Plan is designed. Items of major significance are included in this section of the Open Space Element of the General Plan for Lake County.

A. Location

Lake County lies in the folds of the California Coast Range, on the west edge of the Sacramento Valley. The County is about 25 miles at its widest point, east to west, and about 75 miles long, north and south. It is bordered on the west by Mendocino County; then, clockwise the County borders Glenn, Colusa, Yolo, Napa and Sonoma. Lake County contains 804,000 acres of which 365,739 acres are on Federal and State ownership.

B. Climate

The climate of Lake County is fairly constant in the developed areas of the County, ranging from a maximum of approximately 94° in the summer to a minimum of 30° in the winter. The extreme temperature range runs from 111° as the high temperature to 7° as the low temperature. Precipitation in the County varies from approximately 23 inches in Clear Lake Park to 28 inches in Lakeport and 35 inches in the Upper Lake area. At the higher elevations the rainfall ranges from 45 inches in the Bartlett Mountains east of Clear Lake to 65 inches at Cobb Mountain to the south. The growing season averages approximately 195 days in the Kelseyville-Lower Lake area and 217 days at Upper Lake.

C. Geologic Regions

Lake County lies in the folds of the California Coast Range and the entire County is generally mountainous with valleys

trending northwestward. Steepest elevations are in the north at Hull Mountain, 6,873 feet, in the northwest corner, and Snow Mountain, 7,040 feet in the northeast. Cow Mountain, the west border of the Clearlake basin, rises to 3,924 feet on the Mendocino County line; Cobb Mountain, to the south, is 4,722 feet high. The County slopes to the southeast, with an elevation of 1,105 feet at Middletown; 960 feet in Coyote Valley, northeast of Middletown; and approximately 700 feet in the valleys of Cache Creek and Putah Creek as they flow southeast out of the County.

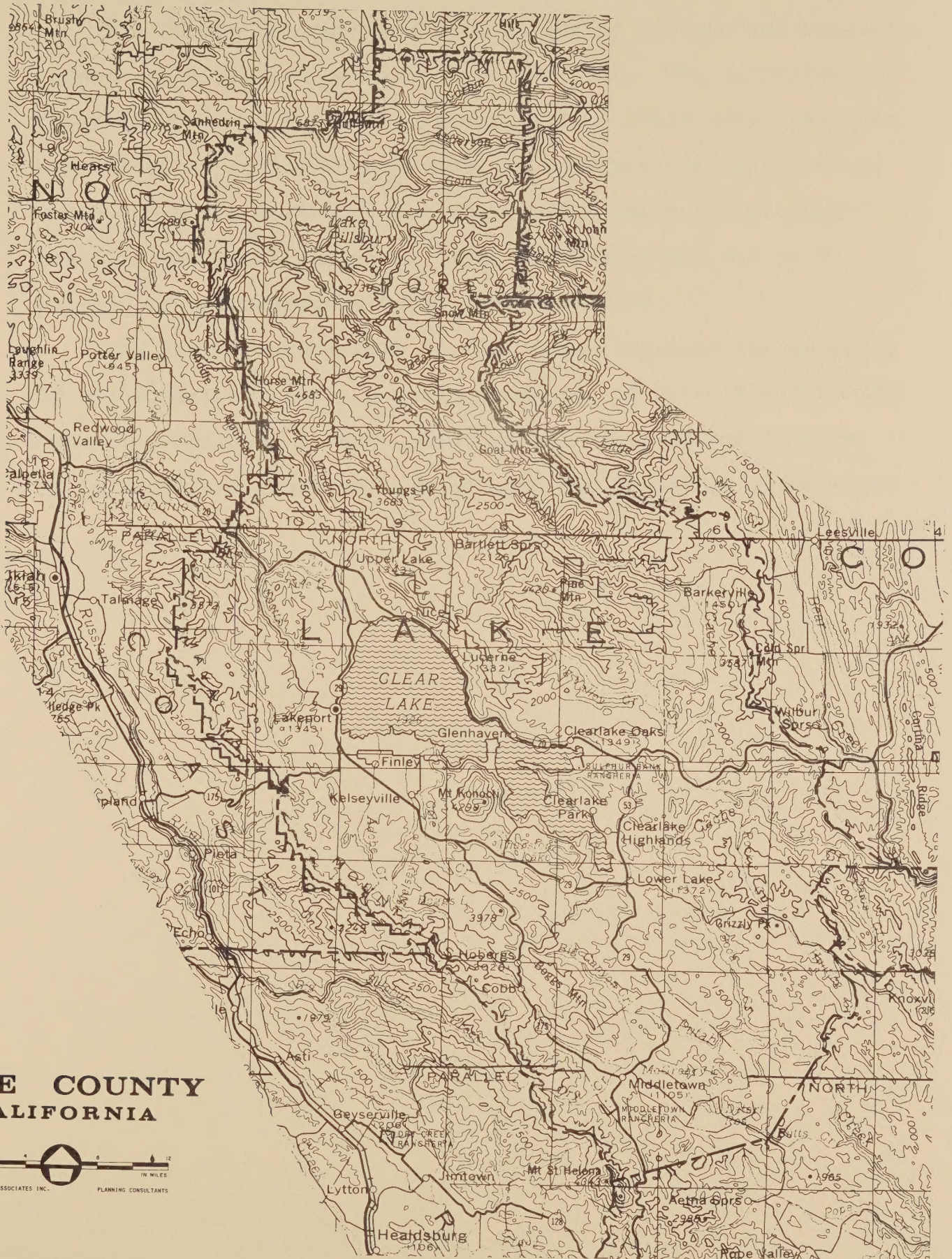
Clearlake Basin - The main geographical feature of the County is Clear Lake, the largest fresh water lake entirely within the boundaries of California. Clear Lake is located near the center of the County to which it gives its name.

Clear Lake is approximately 19 miles long, at its longest dimension, and 8 miles wide. The shoreline, not counting man-made peninsulas and lagoons is approximately 100 miles. The surface area of the lake, at high water, is approximately 68 square miles. The water level varies from 1318.65 feet above sea level, its legal minimum, and to 0. of the Rumsey gauge at Lakeport to approximately 1326 feet, a usual range of 7.5 feet. The lake drains an area of some 460 square miles not counting the surface area of the lake itself.

D. Topography and Slope

In order to understand Lake County in relation to its geographical conditions, two separate land forms must be examined - the mountains and the basins. A relief map of the entire County is displayed for this purpose following this page.

TOPOGRAPHY



**LAKE COUNTY
CALIFORNIA**



CONTOUR INTERVAL 500 FEET.

E. Soil Types

The County is comprised of a series of valleys and mountain ranges which feature peaks up to 7,000 feet. The mountains and hills are part of the Coast Range. A relatively small percentage (about 6% of the County area) is suitable for cultivation. These areas are important for their prime agricultural capabilities and their products. Most of these areas sit on a plateau of approximately 1,500 feet elevation.

The north central area of the County contains the majority of the forest acreage. A good percentage of this is within the Mendocino National Forest. Much of the other upland acreage is in brush and grass and can be used for livestock production.

LEGEND - SOIL TYPES

GROUP 1 - AREAS DOMINATED BY VERY DEEP, NEARLY LEVEL TO GENTLY SLOPING, WELL DRAINED SOILS OF ALLUVIAL FANS AND FLOOD PLAINS.

Hu-Wr-AB	Honcut-Wyman association, 0 to 5 percent slopes
Yo	Yolo association
Zm	Zamora association

GROUP 2 - AREAS DOMINATED BY VERY DEEP, LEVEL, SOMEWHAT POORLY DRAINED SOILS OF FLOOD PLAINS AND ALLUVIAL FANS.

Pd	Pajaro association
Cu	Cole association

GROUP 3 - AREAS DOMINATED BY CLAY SOILS OF BASINS OR BASIN RIMS

CM	Clear Lake association
Mp-B	Maxwell association, 2 to 5 percent slopes

GROUP 4 - AREAS DOMINATED BY VERY GRAVELLY, EXCESSIVELY DRAINED SOILS OF FLOOD PLAINS

Cl-AB	Cortina association, 0 to 5 percent slopes
-------	--

GROUP 5 - AREAS DOMINATED BY DEEP, WELL DRAINED SOILS ON GENTLY TO MODERATELY SLOPING TERRACES

Md-BC	Manzanita association, 2 to 9 percent slopes
Pu-BC	Pinole association, 2 to 9 percent slopes

GROUP 6 - AREAS DOMINATED BY SOILS WITH LOAMY SURFACES AND DENSE VERY SLOWLY PERMEABLE CLAY SUBSOILS

Sm-BC	San Ysidro association, 2 to 9 percent slopes
Yr-sv-E	Yorkville-Sutherlin association, 15 to 30 percent slopes

GROUP 7 - AREAS DOMINATED BY CLAY SOILS ON STRONGLY SLOPING HILLS

Dl-D	Diablo association, 9 to 15 percent slopes
------	--

GROUP 8 - AREAS DOMINATED BY LOAMY SOILS IN UPLANDS UNDERLAIN WITH SANDSTONE

Mq-RL-FG3	Maymen-Rock land association, 30 to 75 percent slopes, severely eroded
HF-Jp-F	Hugo-Josephine association, 30 to 50 percent slopes
Lm-E	Laughlin association, 15 to 30 percent slopes
Mg-LE-EF2	Maymen-Los Gatos association, 15 to 50 percent slopes, eroded

GROUP 9 - AREAS DOMINATED BY SOILS OF STRONGLY SLOPING TO VERY STEEP UPLANDS DERIVED FROM MIXED VOLCANIC MATERIALS.

Kk-Jg-CS-FG2	Kidd-Jiggs-Cohasset association, 30 to 75 percent slopes, eroded
Rj-BY-EF	Red Hill-Butte association, 15 to 50 percent slopes
GB-AK-DE	Guenoc-Auburn association, 9 to 30 percent slopes
CS-EF	Cohasset association, 15 to 50 percent slopes
Ks-PC-FG	Konokti-Pluth association, 30 to 75 percent slopes
Hm-Gp-EF2	Hesse-Glenview association, 15 to 50 percent slopes, eroded
SW-EF	Sobranite association, 15 to 50 percent slopes

GROUP 10- AREAS DOMINATED BY SOILS OF STEEP UPLANDS, DEVELOPED IN METAMORPHOSED SEDIMENTARY MATERIALS.

SF-F	Sheetiron association, 30 to 50 percent slopes
Em-F	Escondido association, 30 to 50 percent slopes

GROUP 11- AREAS DOMINATED BY LOAMY SOILS IN UPLAND AREAS, UNDERLAIN BY METAMORPHOSED BASIC AND ULTRABASIC MATERIALS.

Hj-DF2	Henneke association, 9 to 50 percent slopes, eroded
Bf-Nd-F	Boomer-Neuns association, 30 to 50 percent slopes
Gv-RL-G	Goulding-Rock land association, 30 to 50 percent slopes

GROUP 12- AREAS DOMINATED BY LOAMY SOILS OF MODERATELY STEEP TO STEEP UPLANDS, DERIVED FROM WEAKLY CONSOLIDATED CONGLOMERATE.

Pr-SZ-EF	Phipps-Soper association, 15 to 50 percent slopes
----------	---

GROUP 13- AREAS DOMINATED BY MISCELLANEOUS LAND TYPES.

PP	Pits
mm	Marsh
AZ	Alluvial Land
RW	Riverwash

Soil names based on best information currently available

The County is made up of four major watersheds. The Eel River, Cache, Putah and Stoney Creek represent the main water courses of the county.

There are 34 different soil types in Lake County. They are indicated on the following map and are named for the major soil series that occur within each unit. A soil series is a group of soils that have about the same kind of profile or sequence of layers. Except for a different surface texture, all members of a soil series have major horizons or layers that are similar in thickness, arrangement and other important characteristics. Some soils on the following general soil map have the same soil series for which they are named, but differ by properties or qualities of major importance to use and management. They are separated (or phased) by indicating differences, such as slope, surface texture, or depth of soil.

The 34 mapping units for Lake County are organized into 13 major groups based on soil characteristics and quality, including slope. The 13 major groups and the mapping units within each group are described in the legend preceding the soil type map which follows.

F. Natural Vegetation

The natural vegetation in Lake County is influenced by the climate and topographic features. The following are the general classifications into which the county is divided:

Irrigated Crop Land	20,000 Acres
Non-irrigated Crop Land	24,000 Acres
Pastures and Range	75,000 Acres
Forests and Woodlands	333,205 Acres
Other Lands	6,088 Acres

GENERAL SOIL MAP



LAKE COUNTY
CALIFORNIA

0 2 4 6 8 10 12
SCALE IN MILES
MAHN, WISE & ASSOCIATES INC. PLANNING CONSULTANTS

INDEX of SOIL MAPPING UNITS and INTERPRETIVE GROUPINGS

Name G. Lambert & A. Endo Date 9-28-66Page 1 of 3~~WORK UNIT~~ SURVEY AREA LAKE COUNTY GENERAL SOIL MAP

MAP SYMBOL	SOIL NAME	Percent of Association	INTERPRETIVE GROUPING								Range Site
			Capability Unit		Vegetative Group	Hydrologic Group	Septic Tank Filter Fields	Allowable Soil Pressure	Shrink-Swell Behavior	Corrosivity of Untreated Steel Pipe	
			Irrigated	Dry							
GROUP 1 - AREAS DOMINATED BY VERY DEEP, NEARLY LEVEL TO GENTLY SLOPING WELL DRAINED SOILS OF ALLUVIAL FANS AND FLOOD PLAINS	Hu-Wr-AB Honcut-Wyman association, 0 to 5 percent slopes	75 20 (5)		IIe1 IIe1	A A	B B	Moderate Moderate	Moderate Moderate	Low Moderate	Moderate Moderate	1/ 1/
Yo	Yolo association Yolo	90 (10)		I	A	B	Moderate	Moderate	Moderate	Moderate	1/
Zm	Zamora association Zamora	90 (10)		I	A	C	Moderate	Moderate	Moderate	Moderate	1/
GROUP 2 - AREAS DOMINATED BY VERY DEEP, LEVEL SOMEWHAT POORLY DRAINED SOILS OF FLOOD PLAINS AND ALLUVIAL FANS	Pd Pajaro association Pajaro	90 (10)		IIw2	E	C	Severe	Moderate	Moderate	High	1/
CU	Cole association Cole	90 (10)		IIIw2	E	C	Severe	Moderate	High	Moderate	1/
GROUP 3 - AREAS DOMINATED BY CLAY SOILS OF BASINS OR BASIN RIDGES	CM Clear Lake association Clear Lake	95 (5)		IIIw5	E	D	Severe	Moderate	High	High	1/
Mp-B	Maxwell association, 2 to 5 percent slopes Maxwell	95 (5)		IVe9	I	D	Severe	Moderate	High	High	1/
GROUP 4 - AREAS DOMINATED BY VERY GRAVELLY, EXCESSIVELY DRAINED SOILS OF FLOOD PLAINS	cl-AB Cortina association, 0 to 5 percent slopes Cortina	90 (10)		IIIs4	B	A	Slight	Severe	Slight	Low	1/
GROUP 5 - AREAS DOMINATED BY DEEP, WELL DRAINED SOILS ON GENTLY TO MODERATELY SLOPING TERRACES	Md-BC Manzanita association, 2 to 9 percent slopes Manzanita	90 (10)		IIe1	A	B	Moderate	Moderate	High	Moderate	1/
Pu-BC	Pinole association, 2 to 9 percent slopes Pinole	90 (10)		IIIe1	A	C	Moderate	Moderate	Moderate	Moderate	1/
GROUP 6 - AREAS DOMINATED BY SOILS WITH LOAMY SURFACES AND DENSE VERY SLOWLY PERMEABLE CLAY SUBSOILS	Sm-BC San Ysidro association, 2 to 9 percent slopes San Ysidro	95 (5)		IIIe3	D	D	Severe	Slight	High	High	Claypan
Yr-sw-E	Yorkville-Sutherlin association, 15 to 30 percent slopes Yorkville Sutherlin	50 45 (5)		VIe3 VIe3	D D	D* C	Severe Severe	Moderate Moderate	High High	High High	Claypan Claypan
GROUP 7 - AREAS DOMINATED BY CLAY SOILS ON STRONGLY SLOPING HILLS	DI-D Diablo association, 9 to 15 percent slopes Diablo	95 (5)		IVe5	C	D	Severe	Moderate	High	High	Clayey

INDEX of SOIL MAPPING UNITS and INTERPRETIVE GROUPINGS

Name G. Lambert & A. Endo Date 9-28-66Page 2 of 3~~WORK UNIT~~ SURVEY AREA LAKE COUNTY GENERAL SOIL MAP

MAP SYMBOL	SOIL NAME	Percent of Associ- ation	INTERPRETIVE GROUPING								
			Capability Unit		Vegetative Group	Hydrologic Group	Septic Tank Filter Fields	Allowable Soil Pressure	Shrink-Swell Behavior	Corrosivity of Untreated Steel Pipe	Range Site
			Irrigated	Dry							
GROUP 8 - AREAS DOMINATED BY LOAMY SOILS IN UPLANDS UNDERLAIN WITH SANDSTONE											
Mq-RL-FG3	Maymen-Rock land association, 30 to 75 percent slopes, severely eroded										
	Maymen	90		VIIIe8	J	D	Severe	Slight	Moderate	Moderate	Shallow Loamy
	Rock land	10		VIIIe7		D	Severe	Slight	Low	Low	
HF-Jp-F	Hugo-Josephine association, 30 to 50 percent slopes										
	Hugo	55		VIe4	A	B*	Severe	Severe	Moderate	Moderate	Loamy
	Josephine	35 (10)		VIe1	A	C	Severe	Severe	Moderate	Moderate	Loamy
Im-E	Laughlin association, 15 to 30 percent slopes										
	Laughlin	90 (10)		VIe3	G	C	Severe	Moderate	Moderate	Moderate	Loamy
Mq-LE-EF2	Maymen-Los Gatos association, 15 to 50 percent slopes, eroded										
	Maymen	80		VIIIIs1	J	D*	Severe	Severe	Low	Low	Shallow Loamy
	Los Gatos	10		VIIIe31	J	C	Severe	Moderate	Moderate	Moderate	Shallow Loamy
		(10)									
GROUP 9 - AREAS DOMINATED BY SOILS OF MODERATELY STEEP TO VERY STEEP UPLANDS DERIVED FROM MIXED VOLCANIC MATERIALS											
Kk-Jg-CS-FG2	Kidd-Jiggs-Cohasset association, 30 to 75 percent slopes, eroded										
	Kidd	50		VIIe8	J*	D*	Severe	Severe	Low	High	Shallow Loamy
	Jiggs	25		VIIe1	J	C	Severe	Severe	Low	High	Loamy
	Cohasset	20		VIe4	G	C	Severe	Moderate	Moderate	Moderate	Loamy
		(5)									
Rj-BY-EF	Red Hill-Butte association, 15 to 50 percent slopes										
	Red Hill	70		VIe1	A	C*	Severe	Severe	High	High	Loamy
	Butte	20 (10)		VIIe1	A	B	Severe	Severe	Moderate	High	Loamy
GB-AK-DE	Guenoc-Auburn association, 9 to 30 percent slopes										
	Guenoc	75		VIe3	G	C	Severe	Slight	High	Moderate	Loamy
	Auburn	20		VIe11	G	C	Severe	Moderate	Moderate	Moderate	Loamy
		(5)									
CS-EF	Cohasset association, 15 to 50 percent slopes										
	Cohasset	95 (5)		VIe4	G	C	Severe	Moderate	Moderate	High	Loamy
Ks-PC-FG	Konokti-Pluth association, 30 to 75 percent slopes										
	Konokti	85		VIIe8	J	B	Severe	Moderate	Low	Low	Shallow Loamy
	Pluth	10		VIIe8	J	B	Severe	Moderate	Low	Low	Shallow Loamy
		(5)									
Hm-Gp-EF2	Hesse-Glenview association, 15 to 50 percent slopes, eroded										
	Hesse	75		VIIe8	G	B	Severe	Moderate	High	Moderate	Shallow*
	Glenview	20 (5)		VIe1	G	B	Severe	Moderate	High	Moderate	Loamy
SW-EF	Sobrante association, 15 to 50 percent slopes										
	Sobrante	100		VIe1	G	C	Severe	Moderate	Moderate	Moderate	Loamy

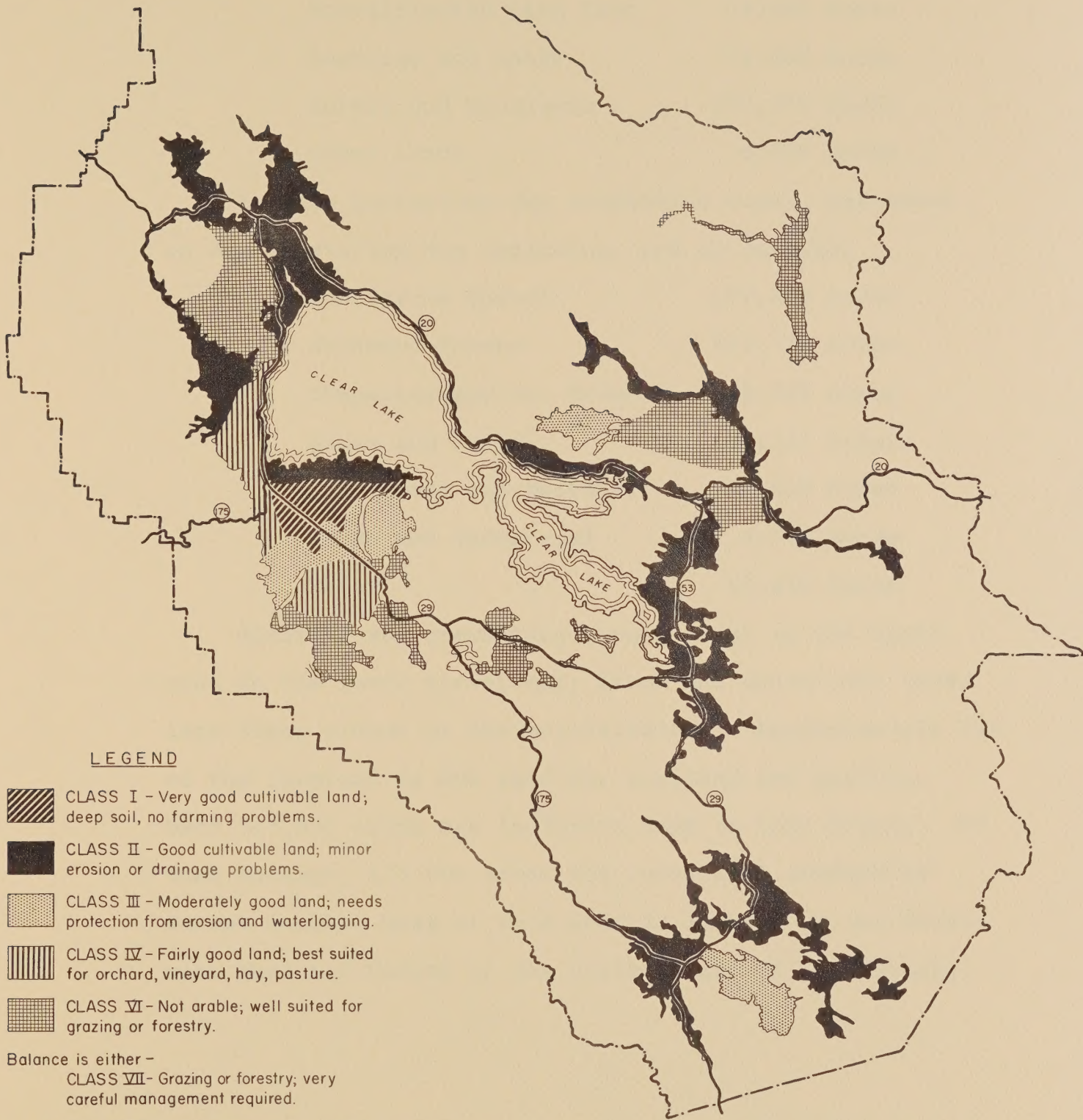
INDEX of SOIL MAPPING UNITS and INTERPRETIVE GROUPINGS

Name G. Lambert & A. Endo Date 9-28-66
Page 3 of 3~~WORK LIMIT~~ SURVEY AREA LAKE COUNTY GENERAL SOIL MAP

MAP SYMBOL	SOIL NAME	Percent of Associ- ation	INTERPRETIVE GROUPING								
			Capability Unit		Vegetative Group	Hydrologic Group	Septic Tank Filter Fields	Allowable Soil Pressure	Shrink-Swell Behavior	Corrosivity of Untreated Steel Pipe	Range Site
			Irrigated	Dry							
GROUP 10 - AREAS SF-F	DOMINATED BY SOILS OF STEEP UPLANDS, DEVELOPED IN METAMORPHOSED SEDIMENTARY MATERIALS Sheetiron association, 30 to 50 percent slopes Sheetiron	95 (5)		VIe1	B	B	Severe	Severe	Moderate	High	Loamy
Em-F	Escondido association, 30 to 50 percent slopes Escondido	100		VIIe8	G	C	Severe	Severe	Moderate	Moderate	Loamy
GROUP 11 - AREAS Hj-DF2	DOMINATED BY LOAMY SOILS IN UPLAND AREAS, UNDERLAIN BY METAMORPHOSED BASIC AND ULTRA BASIC MATERIALS Henneke association, 9 to 50 percent slopes, eroded Henneke	95 (5)		VIIe9	I	D	Severe	Severe	High	Moderate	Serpentine
RF-Nd-F	Boomer-Neuns association, 30 to 50 percent slopes Boomer Neuns	70 20 (10)		VIe1 VIe1	G* B	C C	Severe Severe	Moderate Severe	Moderate Moderate	Moderate Moderate	Loamy Loamy
Gv-RL-G	Goulding-Rock land association, 50 to 75 percent slopes Goulding Rock land	80 15 (5)		VIIe8 ^{1/} VIIIe7	G	C* D	Severe Severe	Severe Slight	Low Low	Moderate Low	Shallow Loamy
GROUP 12 - AREAS	DOMINATED BY LOAMY SOILS OF MODERATELY STEEP TO STEEP UPLANDS, DERIVED FROM WEALY CONSOLIDATED CONGLOMERATE										
Pr-SZ-EF	Phipps-Soper association, 15 to 50 percent slopes Phipps Soper	60 40		VIe3 VIIe1	G G	B B	Severe Severe	Moderate Moderate	Moderate Moderate	Moderate Moderate	Loamy Loamy
GROUP 13 - AREAS	DOMINATED BY MISCELLANEOUS LAND TYPES										
PP	Pits	100		VIIIe9	--	--	--	--	--	--	--
mm	Marsh	100		VIIIw2	--	--	--	--	--	--	--
AZ	Alluvial land	100		VIIIw1	--	B	--	--	--	--	--
Rw	Riverwash	100		VIIIw4	--	--	--	--	--	--	--
*Indicates the rating to be used when coloring single-purpose interpretive maps ^{1/} Not used for range											

*Indicates the rating to be used when coloring single-purpose interpretive maps
^{1/} Not used for range

SOIL CLASSES



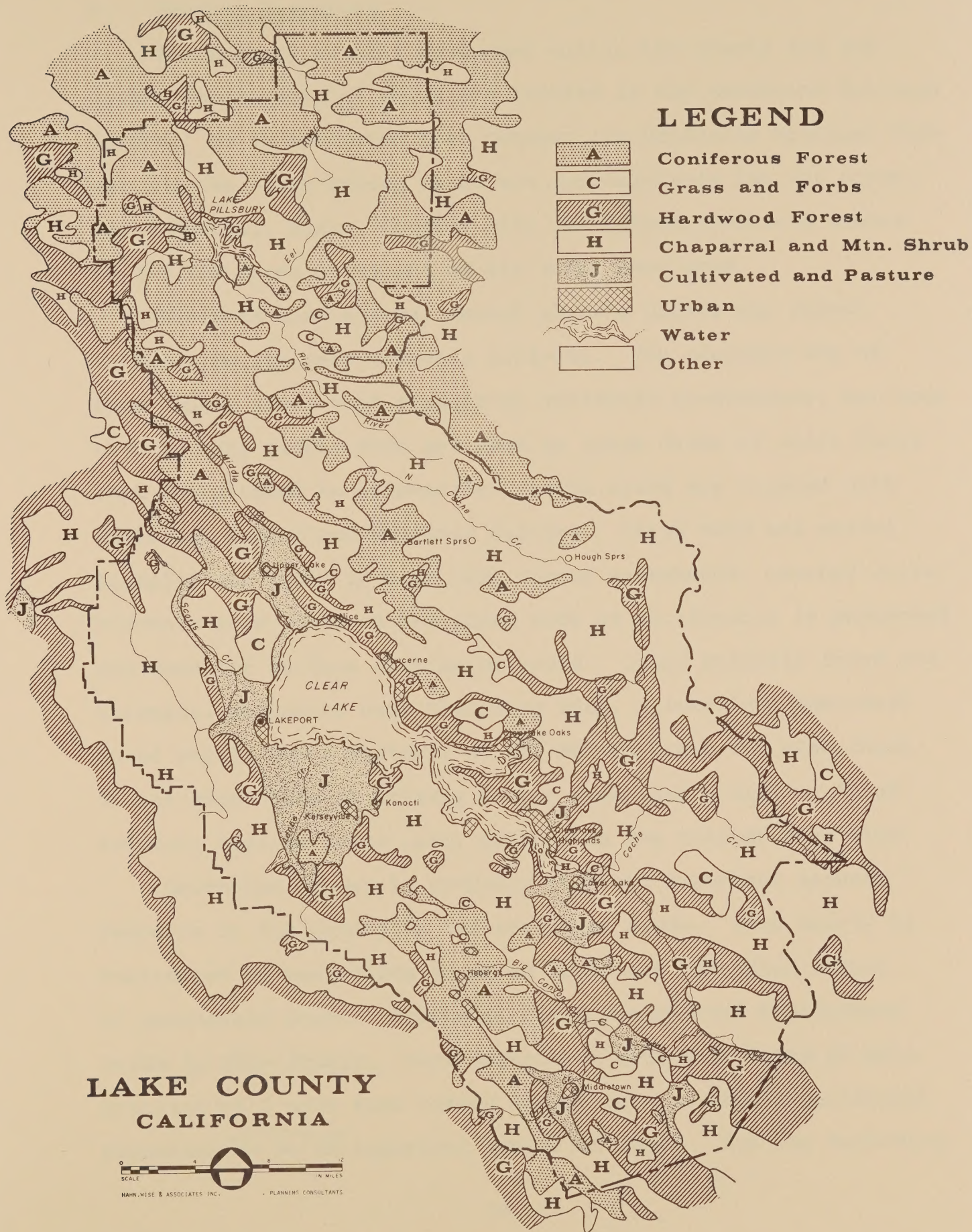
Irrigated Crop Land	20,000 Acres
Non-irrigated Crop Land	24,000 Acres
Pastures and Range	75,000 Acres
Forest and Woodlands	333,205 Acres
Other Lands	6,088 Acres

Acreage tabulations for vegetative cover, are shown on the Vegetation Map following, are as follows:

Coniferous Forest	192,868 Acres
Hardwood Forest	147,770 Acres
Chaparral and Mt. Brush	323,366 Acres
Grass and Forbs	39,341 Acres
Cultivated and Pasture	47,018 Acres
Urban and Industrial	4,798 Acres
Water	51,815 Acres

Grass is the prevailing ground cover in the basin area in the lower elevations; brush and grasslands cover less steep slopes of the mountainsides. Approximately 75% of the farmland is now used for woodland and pasture. Over 547,000 acres are in forest land in Lake County. Of that acreage, 175,000 acres are considered commercial forest lands. Most of this area is located in the Mendocino National Forest in the northern end of Lake County.

VEGETATION



G. Natural Resources

The primary natural resources within the County are the forest lands, most of which are located in the Mendocino National Forest. It is estimated that between the Mendocino National Forest and the State Forest there are approximately 246,300 acres. Total Federal, State, County, City and School Districts amount to 367,158 acres or 45.68% of the total land area.

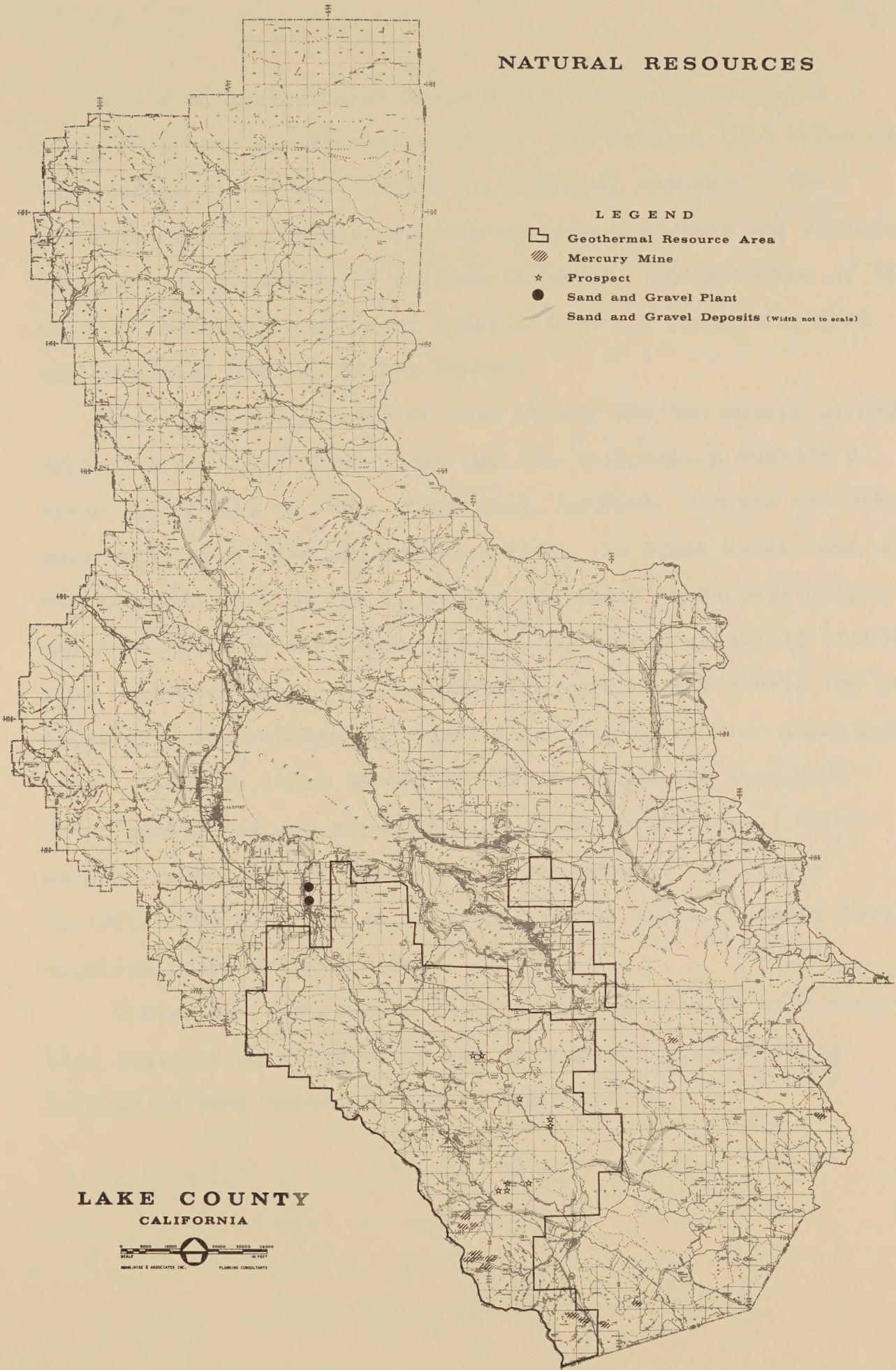
There is also mineral wealth in Lake County due almost entirely to its past volcanic activity. The geologic map of Lake County shows that franciscan sediments predominate, but they have in many places been intruded by large dikes of ultra basic rock now altered to serpentine. Large areas are covered with obsidian, pumice and volcanic cinders. Large sand and gravel deposits are found in most Lake County streambeds, leached white volcanic rock found on the south side of Mt. Konocti is processed and used for surface coating on roofs. Other minerals found are chromite, magnasite near Clearlake Oaks, quicksilver (mercury) found mostly south westerly of St. Helena Creek and also there is the Abbot Mine in Grizzly Canyon Creek and a mine south of Konocti; soda in Borax Lake, sulphur in the sulphur bank mine.

Geothermal power is probably the most important natural resource in the County in two resources areas. Lake County is considered by geologists to be an important potential source of geothermal power. Presently there are several exploratory wells in Lake County. More experience with this types of well drilling will more than likely result in this area's geothermal resources ^{becoming} to be an important source of power. See map following.

NATURAL RESOURCES

LEGEND

- Geothermal Resource Area
- Mercury Mine
- Prospect
- Sand and Gravel Plant
- Sand and Gravel Deposits (Width not to scale)



LAKE COUNTY
CALIFORNIA



The rich agricultural soils of the other areas of the County are also a valuable resource. The natural land forms of Lake County are of great value as a natural resource. The mountains and spectacular scenery provide enjoyment and recreation to many thousands of persons annually. Conservation of this natural resource is of major benefit to every present citizen and potential citizen of the County.

The lakes and streams of Lake County are the source of many varieties of fish. Clear Lake and the tributaries sustain a large population of large mouth bass, catfish, crappie and other warm water game fish and non-game fish. In Putah Creek area of the southern part of the County, a few small mouth bass exist, and more recently the trout and now landlocked steelhead migrate from Lake Berryessa. In the northern part of the County the Eel River provides habitat for substantial populations of important fish. The area ranks second in silver salmon and steelhead trout production and third in king salmon production. Other natural resources are the wildlife resource of the County including the blacktailed deer, California quail, morning dove, mountain quail and water fowl.

Clear Lake, of course, is of inestimable value as a recreation resource as attested by the marinas for private boats located at many locations around the lake.

The approximate present demand for water for agricultural use is as follows: Clearlake Basin - 37,900 acre feet; Middletown-Coyote Valley - 6,700 acre feet; Upper Eel River - no demand.

The projected demand for water in 1990 is as follows: 63,800 acre feet in the Clearlake Basin; 13,300 acre feet in the Middletown-Coyote Valley and 400 acre feet in the Upper Eel River. Total demand in the Clearlake Basin including urban development would be 41,600 acre feet and in the Middletown-Coyote Valley 7,000 acre feet for a total demand of 48,600 acre feet. The estimated water demand for 1990 is as follows: Clearlake Basin - 70,500 acre feet annually; Middletown-Coyote Valley - 14,000 acre feet annually and Upper Eel River - 500 acre feet annually.

It can be readily seen that there will be a severe deficiency between water demand and dependable water supply by the year 1990 unless other sources of water and storage are developed.

It is estimated that there will be a deficiency of 35,300 acre feet in the Clearlake Basin by 1990 and in the Middletown-Coyote Valley 8,000 acre feet. If the same rate of agricultural, municipal and industrial growth were to continue for the next 100 years the annual demand for supplemental water would approach 110,000 acre feet for Lake County.

Lake County is divided by nature into three major watershed areas: The Clearlake-Cache Creek basin drain easterly into Yolo County, Putah Creek basin which drains southerly into Napa County and the Upper main Eel River which drains

HYDROLOGY

LEGEND

- 
Ground Water Recharge Areas
Major Streams
Other Streams
Reservoirs

LAKE COUNTY
CALIFORNIA



H. Hydrology

This section is concerned with three major aspects of hydrology. All have a primary effect on land use. Groundwater resources, water quality, and flood control remain the most important land use determinants within the County.

There are four main watersheds in Lake County: The Cache Creek at 772 square miles feeds and drains Clear Lake, the Eel River of 281 square miles in the northern section empties into the Pacific Ocean in Humboldt County, the Putah Creek of 189 square miles lies in the southeastern section, and the Stoney Creek on the northeastern edge covers an area of 14 square miles. The Cache Creek, Putah Creek and Stoney Creek all empty into the Sacramento Valley. The existing lakes in the County include Clear Lake, with a storage area of 314,000 acre feet and Lake Pillsbury on the upper main Eel River with a storage capacity of 93,000 acre feet.

A major flood control effort up to this time has been the application of flood plain zoning to some of the stream areas in the County.

1. Water Supply

The supply of water in Lake County depends on the runoff of the various rivers and creeks throughout the County. The total dependable water supply is as follows: Clearlake Basin - 30,600 acre feet per year; Middletown-Coyote Valley - 6,000 acre feet per year; Upper Eel River - 1,000 acre feet per year. The water that will be available for reuse from Clearlake Basin amounts to 4,600 acre feet per year. There is no dependable reuse of the water from the other sources.

northwesterly into Mendocino County.

2. Water Quality

Previous studies have clearly indicated unless adequate measures are taken to provide effective sewage collection, treatment and disposal facilities to protect the quality of waters in the Clearlake basin, the problems created by individual sewage disposal systems will increase to an intolerable degree. This is especially critical in many areas adjacent to Clearlake where unfavorable soil conditions, insufficient soil cover and inadequate facilities to process waste are evident.

The principle source of waste which flows into the Clearlake basin is primarily domestic waste which constitutes an estimated 4.0 MGD or 98% of the total seasonal waste flow. Peak weekend and holiday flows have been estimated at 10.8 MGD.

Seventy percent of the permanent population are served by individual waste disposal facilities consisting generally of septic tank and leaching system.

Protection and enhancement of the quality of Clear Lake and the rivers and streams in the County will insure the retention of one of the State's greatest natural resources.

I. Hazard Lands

Within Lake County there are three basic geologic and hydrologic hazards which are major land use determinants. Because of their basic unstable quality, these hazard lands should often become open space lands by the elimination of development for habitation. The three major hazards are:

1. Seismic Hazards

As indicated on the following map, Lake County has

various fault occurrences. The greatest number of faults occur in the southwestern area of the County starting at the Cobb Mountain area and running from the Hopland grade to the south County line. The other area where considerable faults occur are in the southeastern area of the County, particularly from Grizzly Peak eastward and running from Knoxville to the south County line. The two longest known faults occur north of Highway 20 and west of Upper Lake extending from approximately Highway 20 running into Potter Valley in Mendocino County. There is no historical activity in the County.

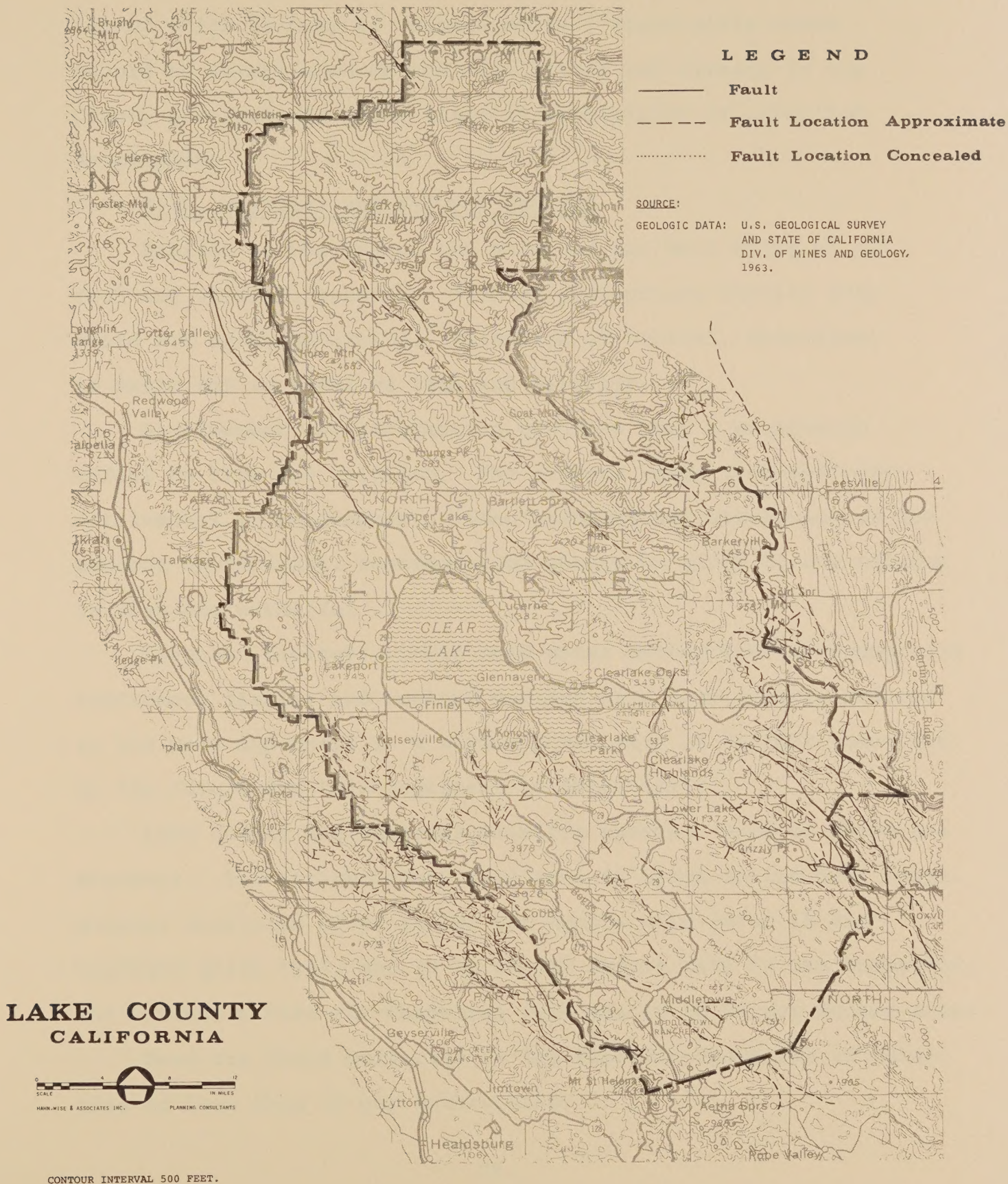
2. Landslide Areas

There are several landslide areas in Lake County due primarily to the franciscan and lava in the area. These areas are primarily dominated by soils strongly sloping to various deep uplands derived from mixed volcanic materials. The general soil map indicates areas where these soils occur. It should be noted that franciscan areas are landslide prone.

3. Flooding Hazards

This subject is covered somewhat in the hydrology portion of this section. The four main watersheds of the County include Cache Creek which feeds and drains Clear Lake, the Eel River in the northern area of the County, Putah Creek in the southeastern section and Stoney Creek in the northeastern section as well as Scotts Creek, Middle Creek and North Fork are all subject to flooding adjacent to their banks. Clear Lake in particular is subject to tremendous variations in water level depending on the intensity of the rains during any year. Flood waters have raised the lake more than 10 feet above its normal

GEOLOGIC HAZARDS



zero on the Rumsey gauge at Lakeport. The lake drains an area of some 460 square miles not counting the surface of the lake itself which is over 64 square miles. Flood plain zones should be established on the main rivers and streams in the County particularly where there is possibility of urbanized development.

J. Fish, Wildlife and Natural Habitat

Habitat is the key to the survival and well being of all fish and wildlife species. Without appropriate habitat they could not exist naturally. Retention of habitat, therefore, is basic for survival of fish and wildlife.

Development and reclamation projects have a pronounced effect on fish and wildlife. The effects range from entirely detrimental to enhancement. When planning any alteration to the present environment, consideration should be given to the effects on fish and wildlife.

Riparian habitat, viable cold water stream habitat supporting anadromous fishes, and wetland habitat have been greatly reduced in the past and there is a strong possibility of further reduction in the future due to development in these areas.

Lake County has numerous wildlife species, some of which are abundant. The entire County land area is black-tailed deer range. Highest densities of 60 to 100 per square mile occur in the woodland grass type, and 30 to 60 per square mile in the chaparral. The extensive Pine-Fir-Chaparral type has 10 to 30 per square mile.

Bear are found primarily in the Pine-Fir-Chaparral in densities of less than 10 per square mile.

Good populations of California and mountain quail occur. California quail occupy most areas of the County, mountain quail are mainly in the Fir-Pine-Chaparral and hardwood type areas. Doves are in good numbers in breeding and hunting season populations except for the higher mountains. Good populations of pheasant occur in limited areas within the agricultural lands. A few blue grouse and wild turkeys are found in the Pine-Fir-Chaparral type.

Limited numbers of water fowl are found in the County because of the low grade water fowl habitat. The only duck of any consequence in Clear Lake is the Mallard. Coots are fairly common along the shores of Clear Lake. The County has some wood duck breeding sites. Riparian and numerous farm ponds are usually surrounded by trees providing nest holes.

There are 291.5 miles of cold water streams; 68.0 miles of warm water streams in the County. There are 1,800 acres of combination reservoirs and 43,335 acres of warm water lakes and reservoirs. There are also 25 acres of unproductive lakes.

Clear Lake is one of the best areas of the State for greaves, particularly the western and pied billed species. Extensive breeding colonies of the yellow-headed blackbird occur at the lake. Medium densities of raptors are found in the County. In the grassland type densities of white-tailed kites reach 2 per 100 acres. The area is one of the best in the State for observing this species.

Fur bearers rate medium population densities, particularly coyotes, racoons, grey foxes and bobcats. Mink are common at Clear Lake.

Endangered species are the Tule elks. The heart of their range is the Payne Ranch in Bear Valley and some are in the Cache Creek drainage areas. The reproduction of this species has been dropping rapidly. It is estimated by the Department of Fish and Game that the range capacity presently is 100 to 150 as they are competing with cattle grazing. Deer are still thriving in the County but there is some decline in the herd because of lack of fires which would provide additional grass lands. Other endangered species are the birds in two of the marsh areas which are declining, particularly the County is losing the osprey because of development of marinas and key type development. Also the marinas are reducing the fish habitat and the ability to provide nutrients. There is a steady loss of the crappie population in Clear Lake and also there is a loss of production in the lake and Cache Creek of smallmouth bass.

Many of the riparian areas along the creek are endangered, particularly Scott Creek drainage basin. The jungle-like habitat supports the greatest diversity of wildlife.

The pockets, bends and flats of Cache Creek supported a micro environment which provided a habitat for many different species of wildlife protected in part by the Valley black oak in the area.

An environment which includes a variety of wildlife is an enjoyable place for present and future populations to live. For some, the presence of wildlife is the attraction, while others prefer the more arduous activities, such as hunting and fishing.

Fish and wildlife are renewable resources providing that

habitat is protected. Present land uses which result in filtration and pollution of streams and lake should be carefully monitored and if necessary, corrected, to assure a clean and productive habitat.

<u>Habitat Types</u>	<u>1963</u>	<u>% of County Total</u>	<u>1980</u>	<u>% of County Total</u>
Pine-Fir-Chaparral	207,773	25.8	207,773	25.8
Minor Conifers	3,000	0.4	3,000	0.4
Hardwood	116,800	14.5	110,450	13.7
Woodland-Grass	94,150	11.7	80,190	10.0
Chaparral	244,373	30.5	232,593	29.0
Grassland	37,800	4.7	39,033	4.9
Agriculture	29,031	3.6	37,254	4.6
Urban+Industrial	20,586	2.6	40,810	5.1
Lakes, Bays, Reservoirs	45,200	5.6	48,367	6.0
Marsh	800	0.1	0	0.0
Riparian	377	trace	370	trace
Barren	<u>3,950</u>	<u>0.5</u>	<u>4,000</u>	<u>0.5</u>
	803,840	100.0	803,840	100.0

K. Existing Public Land

Within Lake County there is 54.5% of the total land area occupied by Federal, State and local government. This land is held by various governmental agencies for a variety of interests and uses. These lands for the most part are non-urban in nature and constitute a great majority of the available wilderness and open spaces within the County.

The Federal government ownership represents 43.8% of the total land area of the County and the State of California ownership is 1.7% of the total land area of the County. Specifically the Federal government under the supervision of the U.S. Forest Service, The Bureau of Reclamation, The Bureau of Land Management and other Federal agencies supervise 351,915 acres of land and water.

The State of California supervises land in the County as follows: Beaches and parks - 560 acres; State Forestry - 3,440 acres; State Land Division - 7,281 acres; Department of Public works - 1,210 acres and other State lands - 1,313 acres for a total of 13,824 acres. The Lake County Flood Control-Water Conservation District has 2,500 acres.

A large majority of these lands lack public access and many areas of public ownership is in a pattern of alternate sections.

The following map indicates in graphic form the distribution of the public lands in the County.

L. Agricultural Lands

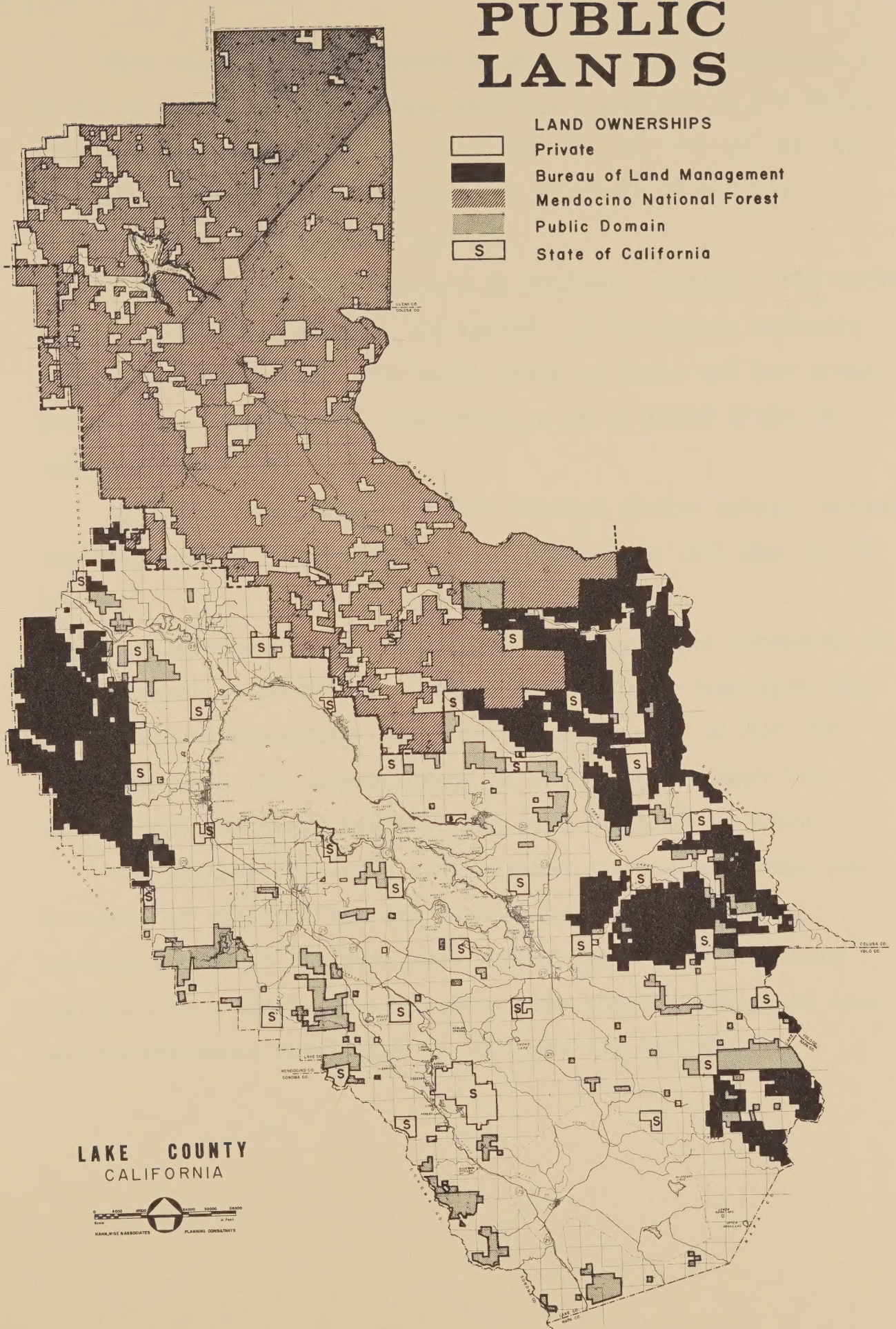
Agriculture is the major economic activity of the westerly side of the Clear Lake basin, in the Lower Lake area, in the Upper Lake area, and in the area east and west of the Middletown area. There are approximately 250,000 acres out of the total land area of 804,000 acres that is classified as farm land. Approximately 15,000 acres are irrigated and 235,000 non-irrigated. Stock raising is carried on in the Class 4 through Class 6 lands which are generally located on the slope areas above the western and eastern sides of the Clearlake basin as well as northerly of Clear Lake.

Fruit and nut crops for 1971 were as follows: Bartlett pears - 6,828 acres; prunes - 460 acres; walnuts - 8,854 acres; almonds - 255 acres. Up until 1971 there were 520 acres of grapevines. In 1972 it is estimated there will be 1,100 in additional acres going into wine grapes.

PUBLIC LANDS

LAND OWNERSHIPS

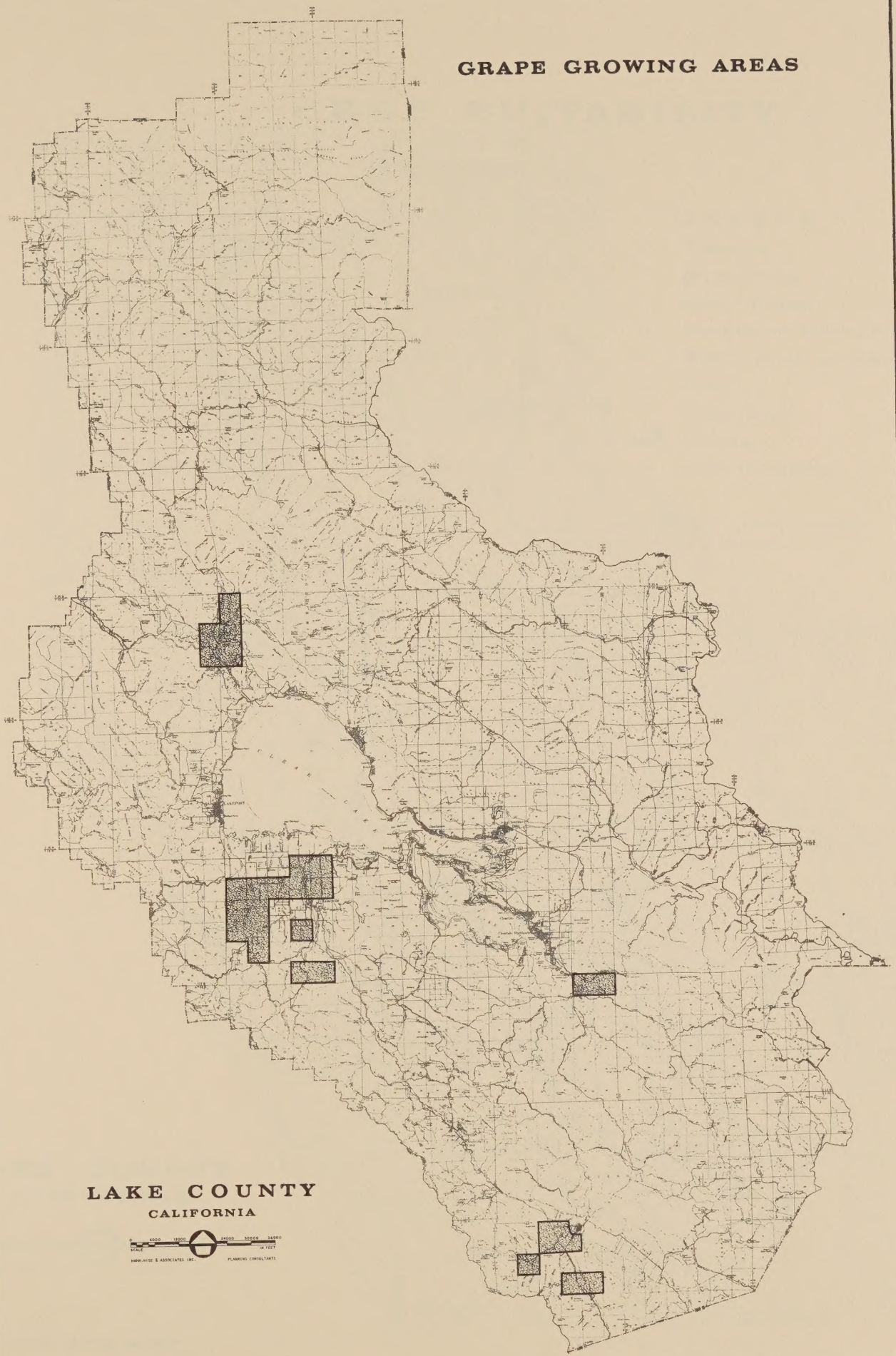
-  Private
-  Bureau of Land Management
-  Mendocino National Forest
-  Public Domain
-  State of California



LAKE COUNTY
CALIFORNIA



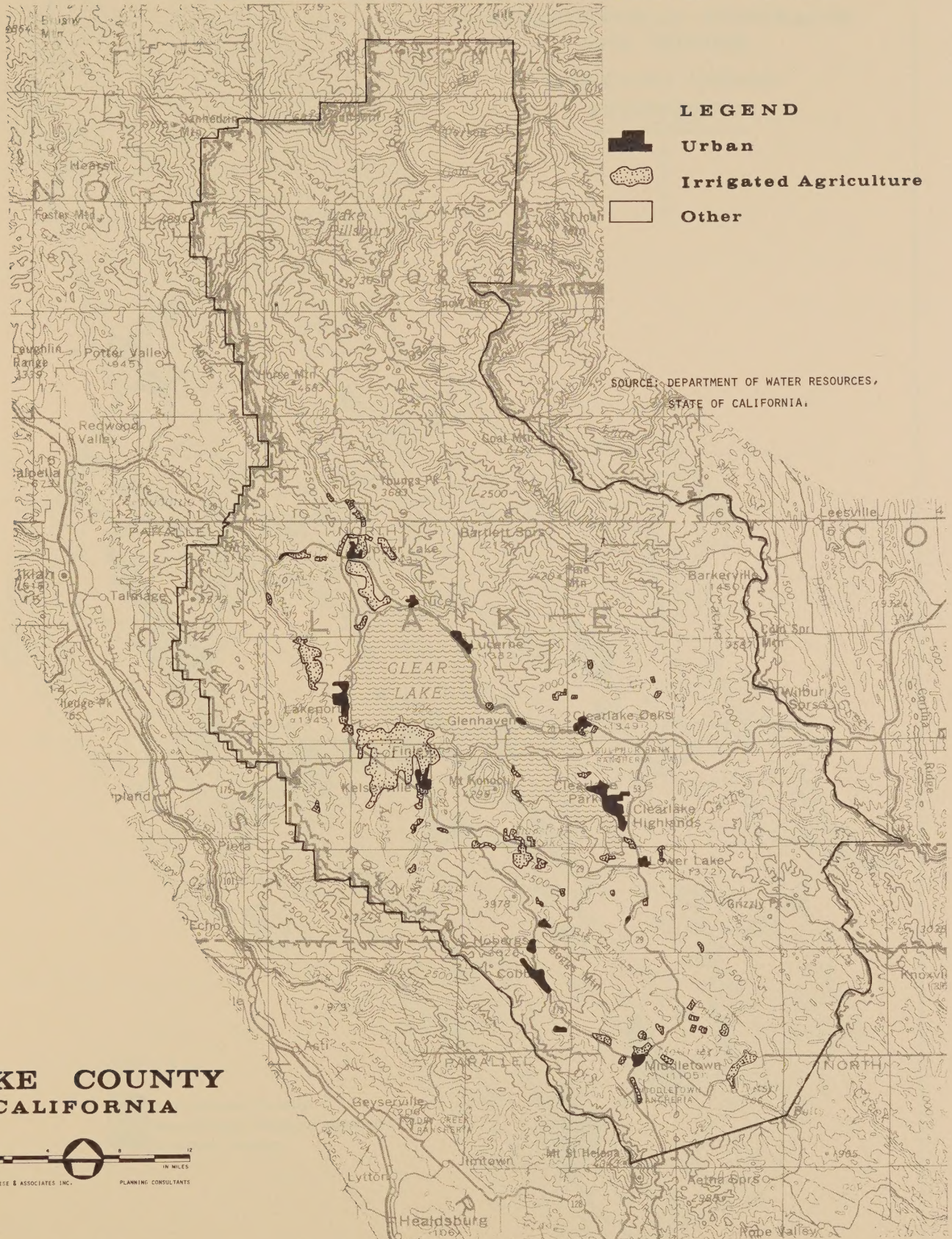
GRAPE GROWING AREAS



LAKE COUNTY
CALIFORNIA

0 5000 10000 15000 20000
SCALE
HARRIS & ASSOCIATES, INC. PLANNING CONSULTANTS

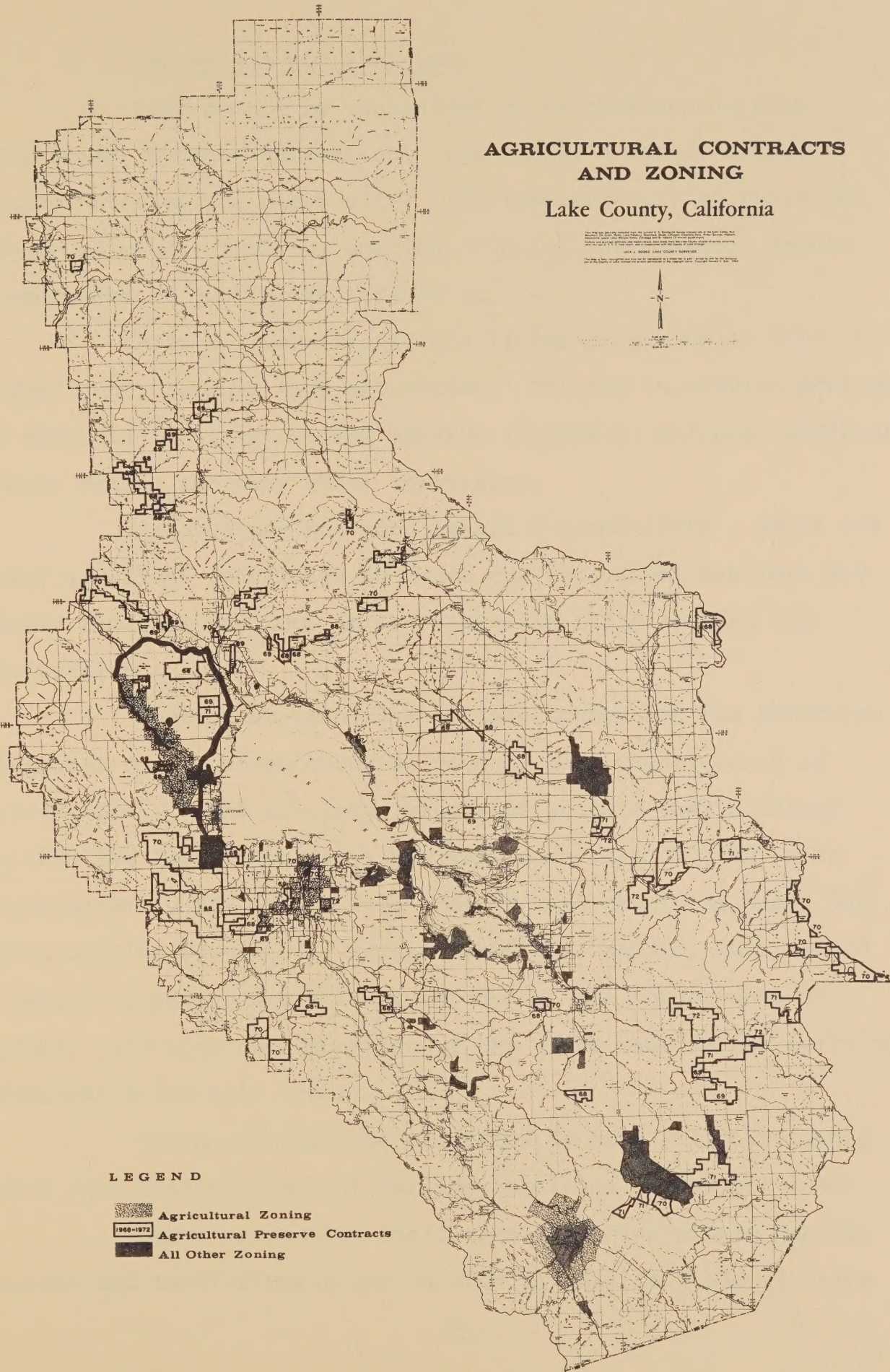
GENERALIZED LAND USE



AGRICULTURAL CONTRACTS AND ZONING

Lake County, California

This map was prepared by the Lake County Planning Department, in cooperation with the California Department of Planning and Research, for the purpose of showing the location of agricultural contracts and zoning in Lake County, California. The map is based on the 1960-1972 Census of Agriculture, and is not intended to be a legal document. It is the responsibility of the user to verify the accuracy of the information shown on this map.



LEGEND

-  Agricultural Zoning
-  1960-1972 Agricultural Preserve Contracts
-  All Other Zoning

M. Recreation and Park Land

Lake County is recognized as an outstanding area for summer outdoor recreation. The county's forest areas, lakes, streams and parks offer limitless activity to those who enjoy swimming, fishing, boating, hunting, picnicking, scenic excursions or just plain relaxation.

Private recreational facilities play a major role in Lake County leisure time activities. Private recreation provides a combination of active and passive interests; marinas, golfcourses, water skiing and many other activities.

Lake County has good resort accomodations. There are many excellent facilities to house the individual visitors and their families who come to the Clearlake basin looking for relaxation.

Recreation resources in Lake County are the Mendocino National Forest which occupies most of Lake County north of Clear Lake. There are large tracts of private land holdings within the forest boundary; however, more than 240,000 acres approximately 30% of the land area of Lake County is under the jurisdiction of the U.S. Forest Service. Camping, hunting and fishing in season are allowed throughout the forest area on public land with the exception of the State Game Refuge north of Boardman Ridge-Cold Creek.

There are improved campsites at Lake Pillsbury along with some trailer space at various locations around the lake.

Other recreation facilities including picnic tables, stoves and trailer space are located at Thistle Glade 24 miles

of Upper Lake; Deer Valley, 15 miles north of Upper Lake; Lower Nye, 30 miles north of Upper Lake; Fir Root, 24 miles northeast of Upper Lake; Horse Glade, 30 miles northeast of Upper Lake; Pilot Grove, a few minutes northeast of Upper Lake. Middle Creek, 8 miles north of Upper Lake also has tables, stoves, water, trailer facilities as well as picnic grounds; Bear Creek, 20 miles north of Upper Lake and Lakeview, 8 miles northeast of Lucerne also have tables and stoves. There were approximately 84470 visitor days⁽¹⁾ in the national forest in 1966 and 180,800 total visitor days in 1971.

Clear Lake State Park, located on the south shore of Clear Lake, is approximately 2 miles northeast of Kelseyville and takes up the westerly arm of the land forming Soda Bay. This site includes 560 acres and more than 2 miles of lake frontage. There are 80 camp sites; picnic sites, trails and boat launching ramp at this park.

With slightly less than a mile in the southwesterly corner of Lake County on the slopes of Mt. St. Helena there is planned an expansion of Mt. St. Helena State Park. The area within Lake County is proposed for hiking only and as a scenic buffer. Areas of intensive use will be in the Sonoma County side of the park.

Within the City of Lakeport are the forty acre grounds of the 49th District Agricultural Association, site of the annual Lake County Fair over Labor Day Weekend.

(1) 12 hour day includes picnics, camping, second home sites and other.

The General Plan provides for the orderly development of additional parks and recreation areas by installation of improved campgrounds and trailer sites in the Mendocino National Forest to attempt to meet the demand for the 5,000 camp and recreational service sites that have been projected. At the present time some 1,516 improved campsites exist, only 278 of them in the National Forest. Scenic riding and hiking trails and several additional parks and recreation areas will greatly increase the opportunity for the visitor to enjoy Lake County.

Additional County and City recreational facilities are indicated below:

PARK AND RECREATION FACILITIES - COUNTY OF LAKE, 1967

<u>Name</u>	<u>Location</u>	<u>Approximate Area</u>	<u>Facilities</u>
Hamilton Park	1 mile north of Lakeport on Clear Lake	100' x 200'	Boat ramp only
Bridge Arbor	Confluence of Scott and Middle Creeks 5 miles north of Lakeport	1½ acres	Fishing access
Nice Co. Park	West side of Nice on Clear Lake	9 acres	Boat ramp, fishing access and day camp
Nice Community Center	Nice	1 acre	Day camp and ball park; club house
Nice Community Beach	Nice on Clear Lake	2 acres	Fishing access and pier; swimming and day camp
Lucerne Alpine Park	Lucerne on Clear Lake	1 acre	Fishing access, day camp & swimming
Lucerne Harbor	Lucerne on Clear Lake	4 acres	Boat ramp, fishing pier & access; day camp & swimming

<u>Name</u>	<u>Location</u>	<u>Approximate Area</u>	<u>Facilities</u>
Lucerne Club House Beach	Lucerne on Clear Lake	150' x 200'	Fishing access, Club House
Austin's Beach	Clearlake Highlands on Clear Lake	4 acres	Fishing access, swimming, day camp
Red Bud Park	Clearlake Highlands on Clear Lake	13 acres	Fishing pier & access, boat ramp, day camp, swimming
Lakeside Park	On Clear Lake near Kelseville	53 acres	Fishing access, boat ramp, day camp, swimming
Highland Springs Recreation Area	6 miles south of Lakeport	2500 acres	Fishing access, day camp, swimming, hunt- ing & hiking
Middletown Swimming Pool	Middletown	3½ acres	Swimming
Library Park	Lakeport (City Park)	3 acres	Fishing pier & access, boat ramp, day camp, swimming
Middletown Dentral Park	1/2 mile south of Middletown, Highway 29	6 acres	Roads, landscaping
Clearlake Oaks Community Park	Clearlake Oaks, on Clear Lake, east of Highway 20	2 acres	Fishing access

Source: Lake County Flood Control & Water Conservation District

PARK and RECREATION ELEMENT

• B-1

FEDERAL

- A** National Forest
- B-1** Van Arsdale
- B-2** Dry Creek Reservoir
- C-1** Walker Ridge
- C-2** Cow Mountain
- D** Scotts Creek Dam

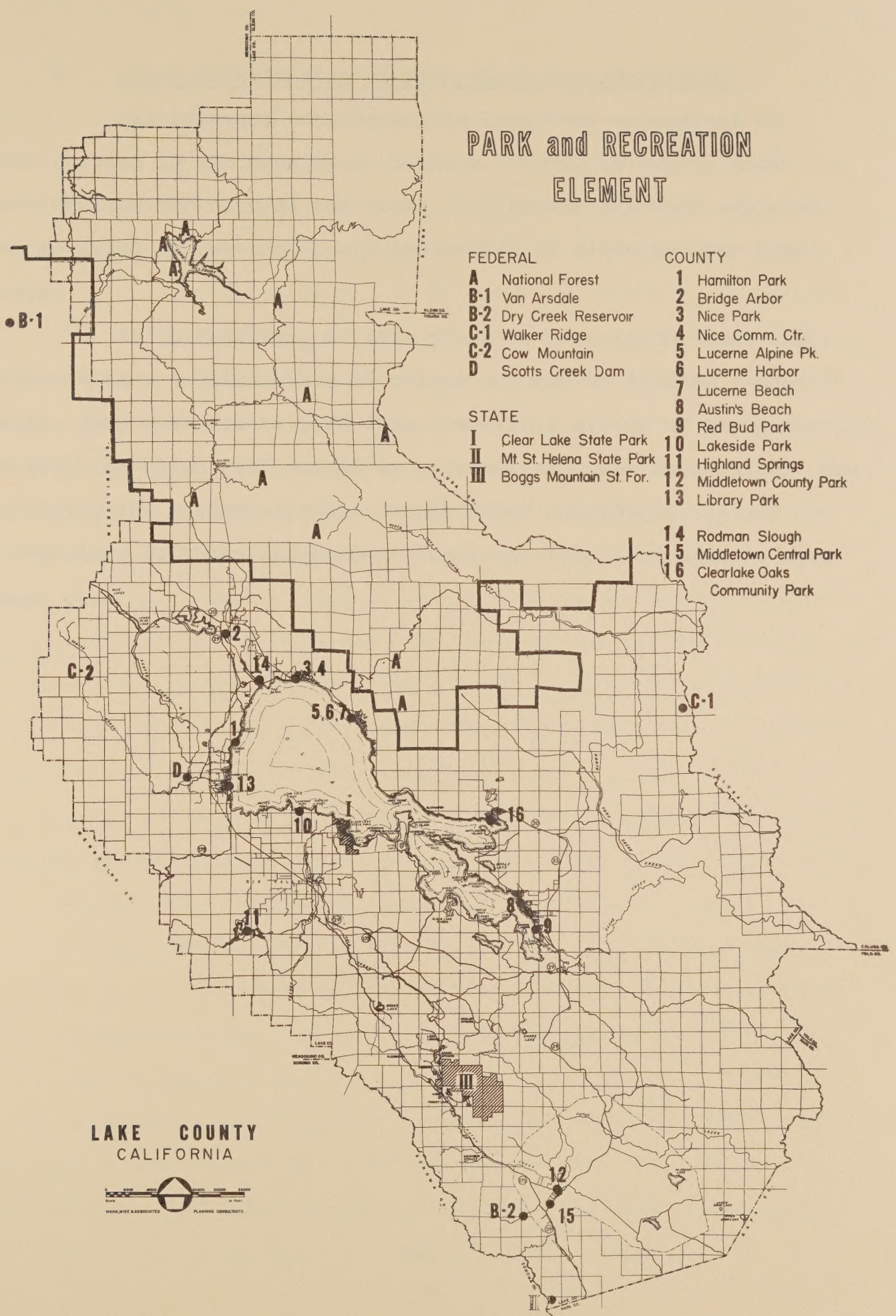
STATE

- I** Clear Lake State Park
- II** Mt. St. Helena State Park
- III** Boggs Mountain St. For.

COUNTY

- 1** Hamilton Park
- 2** Bridge Arbor
- 3** Nice Park
- 4** Nice Comm. Ctr.
- 5** Lucerne Alpine Pk.
- 6** Lucerne Harbor
- 7** Lucerne Beach
- 8** Austin's Beach
- 9** Red Bud Park
- 10** Lakeside Park
- 11** Highland Springs
- 12** Middletown County Park
- 13** Library Park
- 14** Rodman Slough
- 15** Middletown Central Park
- 16** Clearlake Oaks Community Park

LAKE COUNTY
CALIFORNIA



N. Inter-Relationship of Open Space Considerations

All relevant considerations have been summarized in this portion of the Open Space Element. Topic by topic, each component of the natural and human environment has been explored and analyzed in terms of its relationship to planning open space needs.

It is necessary at this point to restate the fact that, although each consideration is unique and can be studied independently, they must now be tied into a workable system of environmental necessities which will result in a functional open space plan. The following are recommendations on the major considerations and coordinations of these independent solutions into a manageable open space plan.

IV. THE OPEN SPACE PLAN

This section is composed of recommendations for all facets, all of which link together to form an Open Space Plan. After each specific item is discussed, the final Open Space Plan, appearing at the end of this section results from a combination of putting all of these items into a coordinated plan.

A. Agricultural Lands

The agricultural lands of the county occupy 31% of the total land in the county. However, fruit, nut, and field crops excluding pasture land occupy only 9% of the county area. Approximately 15,000 acres of farm land is irrigated, yet agriculture is the second greatest source of income. Not only agriculture important to the county, but to the state and the nation.

The income from agriculture in 1971 was nearly \$13,000,000 which is an increase of over \$2,213,000 over the 1970 figure. There are approximately 15,000 acres of irrigated land in the county and 235,000 of non-irrigated land including 170,000 acres in pasture lands. The class 1 lands rated as the best cutivable land; deep soil is located westerly of Lakeport and in the Big Valley area on both sides of Highway 29 and the area around Kelseyville and west of Kelseyville. Class 2 lands which are also good cultivable land with minor erosion or drainage problems is located in the Upper Lake area and the valleys nearly as far north as Horse Mountain and additional area west of the class 1 land which were previously stated west of Lakeport. There are additional lands on the southeast side of Lakeport along Highway 20 and 53 as well as a large amount of class 2 land in the Middletown area and east of Middletown along Highway 29.

A total of 20,000 acres were zoned exclusively for agriculture since 1968. Not all of this area is in prime agriculture land. A continuing increase in population, second home development, highways and other urban uses is a continuing threat to the retention of agricultural land for agricultural purposes. With the advent of second home development, and tourist oriented facilities, the safeguarding of agricultural lands is as essential as the protection afforded other types of land use.

Objective:

Preserve and protect the prime and productive agricultural lands and the agricultural economy of Lake County.

Recommendations:

1. Prime agricultural land, wherever possible, should be separated and protected from other uses, and only those uses related to agriculture should be located on prime agricultural lands.
2. Agricultural uses should be encouraged as a means of providing open space.
3. Agricultural lands which are used for grazing and other purposes although not considered prime soils, should be given protection.
4. Prime agriculture land must be recognized as an equal to other major land uses and given the protection it deserves as a developed use.

B. Recreational Land

Recreation, in Lake County, runs the complete gamut - from the local neighborhood playground, to major regional parks and campgrounds drawing visitors from 250 miles away. The scenic

beauty of Lake County must be guarded. The county has been fortunate in its many natural attributes - its scenic shoreline along Clear Lake and the rivers and streams in the county ranging from lakefront beaches to rugged mountain streams. The county is fortunate too that over 351,915 acres of these lands are owned and controlled by the federal government, most of which is open to the public for a vast variety of recreational purposes. The State of California also has acquired over 13,824 acres for public use and enjoyment. Park and recreation facilities outside of federal and state lands including city and county park lands are over 2,900 acres, the largest of which is the Highland Springs Recreation Area of 2,500 acres. These open space lands meet a great variety of public outdoor recreational needs from picnicking in the various federal and state camping areas or on the shores of Clear Lake to camping in the forest lands in the National Forests in the northern end of the county to fishing on the lake or in the streams or hunting in the mountain areas. Whatever the outdoor recreational needs, Lake County has the open space for it, the largest concern is expansion of facilities for recreationists in that open space.

More parks, campsites, picnic areas and other forms of recreational facilities will be required, not only to satisfy increasing population but also the increasing amount of leisure time and the influx of tourists.

Increasing care must be taken to retain the natural beauty of Lake County. All proposed recreational facilities will be carefully implemented to allow maximum use without damage to the environment so that future generations will be able to enjoy existing amenities.

Objective:

To reserve land for recreational facilities, encourage private recreational development and other open uses in categories characteristic and beneficial to the present and future residents of Lake County as well as to meet tourists needs today and in the future.

Recommendations:

1. Provide for the orderly development and control of a comprehensive recreation system for Lake County.
2. Recreational resources should be protected for the future as these resources are largely irreplaceable natural assets.
3. Encourage or provide recreational facilities and other open uses in central locations near all living and working areas in areas of outstanding beauty sufficient to meet the varying needs of the people to be served.
4. Encourage proper commercial recreation uses to augment public recreational programs.
5. Sites for recreation should be evaluated to assure they have maximum flexibility and adaptibility to the constantly changing recreation needs and interests.
6. The development of waterfront property should be encouraged for all suitable types of recreational uses to meet the needs of local, regional, statewide residents.
7. The river areas which provides the best recreational attraction should be preserved.
8. Recreation areas should take advantage of multi-purpose lands, such as reservoirs, flood plains and forest lands.

9. Encourage the development of a system of scenic highways by establishing special architectural site and landscape control in a visual line control, thereby preserving areas of outstanding scenic quality.

10. Provisions should be made for adequate number of campsites, picnic areas, overnight camping facilities, scenic turnouts and roadside rests.

11. Provisions should be made for riding, hiking and bicycle trails on local as well as statewide programs.

12. To meet the demands of future populations advantage should be taken of the perspective areas of sufficient size and locations for parks, and other similar uses in proper locations.

13. The continuing development of major recreational facilities to serve regional and statewide residents should be encouraged on public lands throughout the county including federal, state and county.

14. The development of major recreational and other related uses should be provided for by private enterprise, and at all governmental levels including the city, the county, state and federal agencies.

15. Encourage private recreational development as a major supplement to public recreation facilities.

C. Wildlife Habitat

An environment which includes a variety of wildlife is an enjoyable place for people to live. Unfortunately many animals have become selected as endangered species due to people, the invasion of development into wildlife habitat is, of course, the

source of the problem. As their natural habitat is encroached upon, animals are confined to smaller and smaller areas. Preservation of habitat is the key to the maintenance and well being of all fish and wildlife species.

Lake County has numerous wildlife species, some of which are still abundant. Federal, state and county owned open space land assure the continued natural habitat in these public areas. Control of access to prohibition of vehicles in the mountains and wilderness areas preserves the natural environment necessary for wildlife to exist.

Objectives:

To preserve and maintain open space as a means of providing natural habitat for species of wildlife.

Recommendations:

1. To maintain all species of fish and wildlife for their intrinsic and ecological values as well as for their direct benefit to people.

2. To provide for diversified recreational use of fish and wildlife.

3. Provide for an economic contribution of fish and wildlife in the best interest of the present and future populations.

4. Provide for scientific and educational use of fish and wildlife.

5. When planning any alteration to the present environment or habitat, consideration should be given to the effects on fish and wildlife.

6. Present land uses which result in siltation and pollution of inland waters should be carefully monitored, and

if necessary, corrected to assure clean and productive habitat.

7. Outstanding wildlife habitats and sites that have unusually high value for fish and wildlife should be carefully considered before any development altering this environment is permitted.

8. Encourage development and enhancement of wildlife habitat through careful uses of methods such as controlled burning, planting, judicious livestock grazing, mechanical land manipulation and creation of ponds in water courses.

9. Recognize and encourage the various appropriate and non-appropriate uses of wildlife. This includes such activities as scientific studies, educational purposes and hunting and fishing.

10. Retain and develop access to public areas through riding (non motorized) and hiking trails.

D. Natural Resource Lands

The primary natural resource in Lake County is agriculture. In 1971 agricultural products contributed \$12,991,950 to the economy.

Other than agriculture, the basic natural resources plays a minor role in the economy of the county. In comparison to other forest area, the commercial forest land acreage in Lake County is small. Accordingly, there is only a small amount of timber harvested annually. Similar to logging activities, mining also plays a minor role in the economy of Lake County. One potentially great boost to the economy of the county are the possibility of geothermal development throughout the southern portion of the county. Current trends indicate that the existing

commercial forests should be retained as a natural scenic resource and harvesting be kept to a minimum.

The county also contains many natural geologic features which provide scenic interest and are a great attraction to tourists. Conservation of these natural resources is necessary to continue to attract visitors to Lake County.

Objective:

Protect the scenic natural resources of Lake County and preserve areas which are important as commercial natural resources for future generations.

Recommendations:

1. To preserve areas of natural scenic beauty as areas of active and passive recreation.
2. Conserve lands which provide a valuable source of geothermal power for potential future use.
3. Continue to promote a program of agricultural land preservation to assure adequate food supply for the future.

E. Scenic Lands

In Lake County, the entire county is considered as scenic land. Whether it is the agricultural lands westerly of Clear Lake and in the southerly part of the county with its fruit and nut trees and grapevines, the mountainous areas in the north and west including Hull Mountain at 6,873 feet in the northwest corner and Snow Mountain at 7,040 feet in the northeast corner or Cow Mountain on the west border of the Clearlake Basin which rises to 3,924 feet or further south Cobb Mountain at 4,722 feet, Lake County provides a tremendous variety of scenic interests.

Although approximately 370,000 acres of this scenic land is preserved by various public agencies for recreational purposes, many other parts of the county must be protected to retain its scenic beauty.

California's highways in Lake County should be designated as scenic highways in the state of California. The areas which these highways bisect are of great scenic interest, for the most part, and should be protected by zoning regulations controlling setbacks and setting building restrictions to retain the natural beauty along these highways to the greatest possible extent.

The Mendocino National Forest is a scenic asset of great value. As mentioned in other parts of this report, it serves as a natural habitat for many species of wildlife, it is a recreational area for thousands of people a year and provides the county with a portion of its watershed and water conservation resource. Many of the hundreds of campsites are located in that portion of the Mendocino National Forest located in Lake County. These campsites are located along the creeks and streams as well as Lake Pillsbury.

The County Board of Supervisors and the Planning Commission have adopted zoning and subdivision regulations designed to preserve the beauty and quality of environment in Lake County. Building and grading regulations have also helped to retain the county's scenic beauty. Policies in regard to landscaping of cut and fill slopes for road and highway construction and building pads have been adopted and used. The need of requiring planning

of cut and fill slopes and hillside building construction is recognized but further regulations and enforcement for this type of maintenance must be adopted.

Objective:

To conserve, preserve and maintain the scenic lands of Lake County.

Recommendations:

1. Continue to work for the conservation of Lake County's scenic beauty.
2. Develop plans for acceptance of state highways as official state scenic highways and county roads as official county scenic roads.
3. Encourage private developers, utilize conservation methods of using the land. Discourage development on steep slopes unless special techniques of construction are used.
4. Develop and apply zoning and building regulations designed to preserve the scenic areas of the county.
5. Protect agricultural lands as a major open space resource.
6. Encourage private reforestation of hill-sides to enhance the beauty of the county.
7. Adopt regulations requiring the landscaping and maintenance of vegetation on all cut and slope fills.
8. Prohibit encroachment of cut and fill slopes into corridors along scenic highways.

F. Watershed and Water Recharge Lands

Lake County is generally mountainous, with valleys trending northwestward. The steepest elevations are in the north-Hull Mountain, 6,873 feet, in the northwest corner, and Snow Mountain, 7,040 feet, in the northeast. Cow Mountain, the west border of Clearlake Basin rises to 3,924 feet on the Mendocino County line; Cobb Mountain, to the south is 4,722 feet. The county slopes to the southeast, with an elevation of 1,105 feet at Middletown; 960 feet in Coyote Valley, northeast of Middletown; and approximately 700 feet in the valleys of Cache Creek and Putah Creek as they flow southeast out of the county.

Rains extend from October through April. Seasonal averages range from 22 inches at Clearlake Park to 45 inches in the Bartlett Mountains east of Clearlake, and 65 inches on Cobb Mountain to the south. The highest precipitation normally occurs in November through February. This large amount of potentially usable rainfall results in heavy, intense runoff. Lake County is divided into three major watershed areas: The Clear Lake-Cache Creek Basin draining easterly into Yolo County, the Putah Creek Basin which drains southerly into Napa County and the upper main Eel River Basin which drains northwesterly into Mendocino County. The water service areas within these basins are designated the Clearlake Basin, the Middletown-Coyote Valley Area, and the Upper Eel River Basin.

Clear Lake has been used for many years as a reservoir for storage of water for irrigation in Yolo County. This water is also used extensively for recreation purposes. The Clearlake

Basin has three distinct agricultural areas which are Big Valley, the Upper Lake Area including Scotts Valley and Bachelor Valley, and the Lower Lake Area. The firm water yield of the ground water basin in the Clearlake Basin is estimated to be about 20,000 acre feet per year. Pumped diversions from Clearlake by local residents with riparian water rights amount to about 3,000 feet per year of additional firm supply. The total effective firm supply of water presently available for irrigation use at the farmhead gate, and for municipal industrial use amounts to about 35,000 feet per year in Clearlake Basin.

The firm water supply in the Middletown-Coyote Valley Area from groundwater and from Detert and McCreary Reservoirs, amounts to about 6,000 acre feet a year; not quite adequate to meet today's needs.

The Upper Eel River in northern Lake County includes all of the Eel River drainage basin within the county. Due to extreme seasonal fluctuation, the Eel River does not offer a significant firm water supply for the area. Water demands in the area, however, are minimal and additional development of surface supplies probably will not be required to supplement the present spring and groundwater supplies.

Lake Pillsbury owned by the Pacific Gas and Electric is operated to provide some regulation of Eel River flows at the Van Arsdale Diversion Dam and Potter Valley Power House. These are the primary water sources which serve as water recharge supplies by releasing relatively constant amounts of and also provide valuable irrigation water for the agricultural areas of the County.

Demands in Clearlake Basin for water are expected to be about 90,000 acre feet per year in the year 2020 with a corresponding supplemental demand of nearly 61,000 acre feet per year. Additional dams and reservoirs will have to be constructed in order to have sufficient storage capacity to meet this demand for agriculture and for the urban population of the county. Total water demands for Middletown-Coyote Valley will be about 1,600 acre feet per year in the year 2020.

Care must be taken to keep the present supply of usable water at a quality which is safe for human use and free from long-range pollutants. Every effort must be made to keep agricultural runoffs, industrial and human waste from lowering the water quality below permissible standards.

Objective:

To preserve the quality of the existing water supply in Lake County and adequately plan for the expansion and retention of valuable water supplies for future generations.

Recommendations:

1. Provide for the safety and welfare of the residents of the County by flood control efforts on a regional scale.
2. Continue to assure the high quality of water within the county by emphasizing programs which stop intrusion of agricultural waste into the water supply.
3. Every precaution must be maintained to eliminate the danger of any pollution to the streams and lakes as well as recharge areas through human and industrial waste and agricultural runoff.

4. Continue a program research into the future water demands of Lake County to establish the need for any future facilities.

5. Promote a plan for future expansion of water storage reservoirs to be utilized as water supply as well as recreation.

6. Utilize latest scientific techniques towards reclamation and recycling of waste water.

G. The Plan

The foregoing sections are a general discussion of the various facets of open space. These are combined in broad categories in the open space plan for Lake County. This plan as well as the rest of the text and maps comprising the open space element is only one part of the Lake County General Plan and should not be considered out of this context.

Although this element of the General Plan is to discuss open space in Lake County, it provides for areas to be set aside for human settlement consistent with realistic growth projections.

It must be recognized that adequate land has been set aside for urban expansion, primarily for residential use. Additional land will be needed for commercial and industrial growth and steps should be taken to direct this growth. Adequate open space must be set aside in all developing urban areas.

Easements and right-of-ways for public utilities, power transmissions and transportation are necessary for future populations but their intrusion on the natural landscape should be held at a minimum.

Open space in the county may be achieved in many different ways. These may include scenic easement agreements, open space agreements, agriculture preserves and outright dedication. It is the diversification of usage that makes it most effective. The Mendocino National Forest provides broad expanses of open space, while the careful planning of populated

residential areas may provide a proportionate amount of open space for relief and contrast. Open space may be used advantageously in conjunction with all types of land use as well as unused land. In Lake County there is a desire to retain the natural beauty and rural atmosphere, therefore, knowledgeable application of open space in planning is of utmost importance.

Objectives:

To retain the character and natural beauty of Lake County by the preservation and control of open space.

Recommendations:

1. To define natural urban areas of growth through the use of open space.
2. To encourage recreational facilities which will provide open space at all governmental levels.
3. To encourage the government to retain open space in the National Forests, Bureau of Land Management Areas and State Lands as well as other public areas.
4. To encourage the incorporation of open space in all types of development, including residential, commercial and industrial.
5. To help retain the rural atmosphere of the county through the use of open space.
6. To retain agricultural lands for open space as well as for economic reasons.
7. To encourage open space through clustering of development with passive and active areas.

8. To inventory and locate natural areas worthy of special consideration and attention and establish special use areas.

9. To establish open space patterns which will compliment the locations of future developments.

10. To define and establish the use of primary flood plain areas as open space.

The Open Space Plan is illustrative only and it is obvious that there are overlapping interests in the various designations shown. As an example, parks and recreation areas are also wildlife habitat. The Plan illustrates only that parks and recreation land is already publicly protected when supervised by public agencies. These and other details are more completely discussed in the foregoing text.

OPEN SPACE ELEMENT

LEGEND

OPEN SPACE:
(Existing and Proposed)

Forest Service Lands

- Crest Zones
- General Forest Zones
- Front Zones
- Travel Influence Zones
- Water Influence Zones
- Special Zones
 - Wilderness Area
 - Scenic Area
 - Geologic Area
 - Archaeologic Area
 - Historical Area
 - Botanical Area
 - Zoological Area
 - Natural Area
- Management Units
- Bureau of Land Management
- Main Waterway & Reservoir
- Private Land Open Space

- URBAN
- SUBURBAN
- RECREATION-RESIDENTIAL
- AGRICULTURE

RECREATION:

- Federal**
 - B-1 Van Arsdale
 - B-2 Dry Creek Reservoir
 - C-1 Walker Ridge
 - C-2 Cow Mountain
 - D Scotts Creek Dam
- State**
 - ① Clear Lake State Park
 - ② Mt. St. Helena State Park
 - ③ Boggs Mt. State For.
- County**
 - 1 Hamilton Park
 - 2 Bridge Arbor
 - 3 Nice Park
 - 4 Nice Comm. Center
 - 5 Lucerne Alpine Park
 - 6 Lucerne Harbor
 - 7 Lucerne Beach
 - 8 Austin's Beach
 - 9 Red Bud Park
 - 10 Lakeside Park
 - 11 Highland Park
 - 12 Middletown Co. Park
 - 13 Library Park
 - 14 Rodman Slough
 - 15 Middletown Central Park
 - 16 Clearlake Oaks Community Park

LAKE COUNTY
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DEFINITION OF FOREST ZONES

CREST ZONE - The crest zone is characterized by high and frequently rocky ridges and peaks, small streams and lakes, meadows, rocky barrens with vegetation typically alpine or soo alpine.

The zone provides a summer habitat for wildlife and a limited amount of forage for livestock. Many of the lakes and streams are suitable fish habitat. Most areas are well suited to low density recreational use.

Emphasis is to protect or improve water quality to safeguard the natural environment, and to protect interesting and unusual features.

GENERAL FOREST ZONE - The zone is characterized as the region's most important source of commercial timber, a significant producer of livestock forage where openings occur, an important habitat for fish and wildlife, and a major water yield area. This has the largest acreage of any management zone in the region.

Growing conditions and ground cover are generally favorable for maintaining satisfactory watershed conditions. Soils will tolerate only limited disturbance.

The zone includes choice habitat for big and small game, upland game birds, waterfowl, small animals and birds, and fish.

Recreational use is of the back-country variety, and of low density.

FRONT ZONE - This zone includes the more arid areas where conditions favor the growth of grass, brush, tree cover which are not generally associated with commercial forest types.

The vegetation is characterized by various associations of grass, sagebrush, pinyon, juniper and bitter brush.

Parts of these zones have significant potential for range and wildlife habitat and the zone is an important producer of livestock forage; it includes most of the regions winter range for big game animals.

Recreational opportunities are commonly hunting, travel, rock hounding, warm water fishing.

Emphasis is on forage production for livestock and the protection or improvement of wildlife habitat consistent with improving and maintaining soil stability.

TRAVEL INFLUENCE ZONE - This zone includes areas of existing or anticipated significant recreational occupancy, use and enjoyment along existing and planned old land routes of travel, not otherwise included in special zones, or the water influence zone.

This zone is usually irregular in shape depending on the nature and use of the travel routes, existing and planned occupancy use, and the character of the terrain and vegetation.

Emphasis is on maintaining or enhancing beauty and attractiveness, and on developing and maintaining suitable recreation sites.

WATER INFLUENCE ZONE - This zone includes areas of significant existing or anticipated water oriented recreational occupancy, use and enjoyment on and along lakes, reservoirs, streams and rivers not otherwise included in special zones. This zone is usually irregular in shape depending on the aquatic environment, existing and plant occupancy use and the character of the terrain and vegetation.

Emphasis is on maintaining or enhancing water quality and on-site use, beauty and attractiveness, and on developing and maintaining suitable water oriented recreation sites.

SPECIAL ZONES - Special zones include areas classified by Congress or formerly designated by the Secretary of Agriculture. They include the following:

WILDERNESS - The wilderness act defines wilderness as "an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain".

Wilderness is characterized by extensive roadless undeveloped areas, traversable only by trails or cross-country travel, where visitors may find a degree of solitude not assured elsewhere.

The goal is to maintain an enduring system of high quality wilderness; perpetuate, and where necessary, restore those values dependent upon wilderness environment.

SCENIC - Scenic areas or places of outstanding or matchless beauty which requires special management to preserve these qualities.

These areas are characterized by containing one or more examples of outstanding vegetation or topography features which provide significant opportunities for existing or anticipated public study, use and enjoyment.

The goal is to maintain and enhance the scenic values, and retain a natural appearance wherever practical. Encourage public study, use and enjoyment, and allow other uses consistent with protection of outstanding scenic values.

GEOLOGICAL - These areas containing outstanding formations or other features of the earth's development which requires special management to preserve them in their undisturbed condition. Geological areas are characterized by outstanding examples of rock or mineral formations with a type, pattern or history of rock development provides significant opportunities for study, use and enjoyment.

The purpose is to maintain and protect geologic formations from defacement and destruction and where this can be assured, encourage safe study, use and enjoyment, and foster greater understanding of the earth's formation.

ARCHAEOLOGICAL - These areas contain significant evidence of use by aboriginal people which requires special management to preserve its evidence.

These areas are characterized by significant material remains (artifacts, monuments, pictographs, ruins) of past human life and activities that provide opportunities for scientific study interpretation and public viewing.

The purpose is to protect archaeological evidence from vandalism, and permit investigation and encourage public viewing when protection from vandalism is assured.

HISTORICAL - These areas containing interesting remnants of life and activities of earlier settlers in America, such as battle grounds, mining camps, old cemeteries, pioneer roads and trails and early trading sites.

The purpose is to protect, preserve and interpret the historical evidence and original surroundings for public safety and enjoyment.

BOTANICAL - These areas contain specimen plants, plant groups, or plant communities of unusual ecological interest because of their form, color, occurrence, habit, life history, arrangement, environment, rarity or other features.

The purpose is to maintain or enhance, and restore unique botanical and related features of ecological interest. Interpret the special features and encourage public use, enjoyment, and study.

ZOOLOGICAL - These areas contain key habitats for classes of animal life which have unique values because of occurrence, habit, life history, ecological relationships, environment, rarity and other features.

The purpose is to maintain enhance, and restore (when necessary) key animal habitat. Interpret the special features of the area. Encourage public use and authorize uses only as consistent with protection of enhancement of key habitat and unique zoological values.

RESEARCH NATURAL - These areas have special or unique characteristics, scientific or educational interests. They are protected against activities which directly or indirectly modify natural ecological processes.

The purpose is to protect against unnatural encroachment which directly or indirectly modify natural ecological process and engage in those practices necessary to preserve the areas.

V. IMPLEMENTATION OF THE OPEN SPACE PLAN

A. Need for Open Space Implementation

Emphasis has been made throughout this report of the great benefit that can be gained from a vital and active open space program. A plan for open space maintenance and development will remain just a paper plan unless accurate scientific means of implementation are given to show how such a plan will "work" and prove to be practical.

It was discussed earlier that the property owner now absorbs most of the burden in terms of tax payments for community facilities and amenities. The tax payer has reached the saturation point where additional taxes for purchase of open space lands becomes totally impractical. If the acquisition of additional land is needed to implement the open space and parks and recreation plans, then various new methods of obtaining this land must be found. The following brief statements highlight some of the current, practical methods of effectuating open space maintenance and acquisition as well as control which should be carefully evaluated as to their parts in the implementation program. Other methods should also be carefully considered and utilized where appropriate.

B. Current Methods of Open Space Implementation and Results

The following methods have been attempted and found to be quite successful, if implemented, in obtaining open space. It is recommended that these be continued and enlarged.

1. Zoning and Subdivisions, General

These two forms of regulatory mechanisms give the county and its city the power to promote the public health, safety,

morals and general welfare. The two powers are essentially a result of the realization of the importance of the whole community's rights being more valuable than the right of an individual doing what he wishes with his land. Zoning and subdivision regulations are the primary method of land use regulation without the use of land purchase with compensation. Because there is no payment or land purchase involved, these two forms of land regulations are limited to the extent which they may be used.

a. Zoning Regulations

(1) Exclusive Agricultural Zoning

Since 1968 the county has been engaged in an active and relatively successful effort to protect its highly productive land through an exclusive agriculture program which has been calculated as an implementation of the county's total planning program. It continues to be the county's position that agricultural zoning must continue to play an important role in the protection of agricultural lands. This, backed by firm policy, can be an effective tool which cannot be overlooked in accomplishing the desired goals set forth in the open space element.

Results - To date there has been 11,439 acres set aside in the exclusive agricultural zoning classification.

(2) Flood Plain Zoning

Flood plain zoning is a necessary provision to assure permanent open water channel in flood prone areas. As a result of strict flood plain regulations for building, open space is virtually assured.

Results - Lake County has adopted flood plain zoning regulations which have been applied to Scott Valley.

b. Subdivision Regulations

Subdivision regulations help to guide development on land which is not yet a part of the urbanizing pattern. Specific subdivision regulations can effectively guide development by the control and placement of streets, utilities, sewerage and water systems. The regulations can also require open space or recreation lands to be set aside as part of a development. Therefore, areas of valuable open space can be deterred from development by utilizing this type of regulation.

The County Subdivision Ordinance adopted in 1971 has a provision to allow "optional design" when the Planning Commission and Board of Supervisors finds that a proposed development will

"(1) produce a more desirable and livable community than would be affected otherwise, and

(2) create a better community environment through dedication of public areas, or setting out open space lands whether dedicated or owned in common".

The County Subdivision Ordinance as adopted also has a provision to "provide for adequate and appropriate public recreation facilities for the subdivision by the dedication of land therein or the payment of fees in lieu thereof".

Results - The County is requiring new development to provided for either public recreation facilities, private recreation facilities held in common or open space land held either for the benefit of the person in the development or dedicated to to the public.

2. Land Preserves with Tax Incentives

The Land Conservation Act of 1965 (Williamson Act) establishes that property tax incentive to private land owners who agree, by contract, to keep their land in agricultural use for 10 years. After the contract is signed with the county involved, the property owner agrees to keep his land in agricultural use and is taxed on the income from his property and not the speculative market value of that land. This enables the property owner to resist the pressures of premature development through high tax rates.

Briefly stated, the basic reason behind the Conservation Act is to reduce urban sprawl, premature development of agricultural land and thus protecting the agricultural economy.

Its fundamental long range benefits would include a reduced need for schools, roads, utilities and particularly governmental services that uncontrolled sprawl inevitably brings. Most important of course is the great amount of productive open space that is provided.

It is necessary, however, to point out that to be successful the implementation of this program must be based on community and county goals for in the preservation of agricultural and open space land.

The program was not designed to simply lower taxes, and contracts should entered into only when the agricultural committee can be shown that there is a positive community benefit.

Results - The county has entered into this program after appointing an agricultural committee to screen the applications and after establishing the following evaluation procedure:

Although a variety of open space land is worthy of protection, such as crop land, scenic land, scenic corridors, grazing land and watershed areas, the county feels that only prime agricultural land or productive crop and grazing land should be considered in regards to establishing agricultural preserves.

Application for establishment of an agricultural preserve should not be considered unless the parcel or group of contiguous parcels to be included in the preserve contains 40 or more acres and shall have an actual gross income during 3 of the last 5 years from the production of animals and/or unprocessed vegetable plant products. In the case of recently improved lands, they shall have potential gain in the succeeding year of producing a gross income from the production of animals and/or unprocessed plant products.

The following criteria for consideration was adopted by the county:

- a. That contracts be executed for a minimum ten year period and shall be automatically extended at the end of each year.
- b. That all agricultural preserves be covered by exclusive agricultural zoning - minimum acreage of 40 acres.
- c. That school district tax equalization program be recommended to the State Legislature as a companion feature of this program.

d. That the planning department review all applications in consort with the agricultural committee on the basis of the County General Plan.

e. That the Board direct the agricultural preserve committee to develop the administrative procedures to implement this report.

f. That the application shall include a statement to determine if the applicant's property is included within a soil bank.

Since Lake County's entrance into this program in 1968, 38,702 acres have been covered by contracts. Exclusive agricultural zoning and contracts cover 50,141 acres.

3. Scenic Easements

Section 51050 of the California Government Code establishes that "any city or county which has adopted a general plan may accept grants of open space easements or open space agreements on privately owned land lying within the city or county".

The purpose of such easements is for the preservation of land as open space in the best interest of the state, city or county and is important to the public for the enjoyment of scenic beauty, for the use of natural resources, for recreation, or for the production of food or fiber and specifically that its potential is for future generations.

The State presently has an open space reimbursement program (Section 14112, Open Space Subvention Act). The county should investigate this program and determine the best way to proceed in initiating open space agreements within the county.

Results - The Planning Commission is currently considering the requirement of dedications of scenic easements along County roads designated as Scenic County Roads.

The following guidelines are suggested for review and acceptance of scenic easements:

- a. A substantial portion of the property must be within site of a public road, park or other significant open space which is in the ownership of the State, County or other public agency.
- b. Its relationship to adjacent parcels under scenic easement should be considered and its proximity to other areas of scenic community value should be determined.
- c. The impact of reduced tax revenue on the County should be evaluated.
- d. The land must have true scenic beauty to have some community value.
- e. The compatibility of the parcel with the General Plan should be evaluated.
- f. The possibility of any portion of scenic easement land being required for County or State Highway purposes or for any other purpose that might require condemnation.
- g. Compatible uses that may be allowed on scenic easement lands. Uses that may be considered are those that will not mar the landscape, such as cattle grazing or riding and hiking trails.

Where scenic easements are accepted they shall be:

1. Dedicated for a period of not less than 10 years and shall be irrevocable during that period. They shall be automatically extended at the end of each year.

2. Existing dwelling units on the property must be removed from scenic easement boundaries.

4. Encouraging Private Open Space Development

There are a number of privately oriented uses of open space which add substantially to the enjoyment of natural resources of the area. Privately used golf courses, hunting and fishing preserves and clubs, private campgrounds and visitor ranches, all add to the usable open space and allow a greater variety of recreation facilities. It shall be the policy of the County to encourage and stimulate additional private open space development.

Results - To date several golf courses have been developed as a part of subdivision development in the County, particularly in the Clearlake Basin area.

C. Other Open Space Implementation Possibilities

1. Public Land Ownership

In Lake County over 51% of the County's land area is owned by governmental agencies. The Federal Government owns 43.8%, the State owns 1.7% and the County owns the balance. Most of the Federal land is contained in the Mendocino National Forest and Bureau of Land Management. These figures do not include the 41,000 acres under Clear Lake owned by the State.

These jurisdictions should continue to acquire those lands which are significant to each ones level of responsibility. If it is really the intent to preserve open space, there must be a total mobilization of effort by all agencies and all levels of government. For only through the pooling of concentrated action can we hope to be effective.

Results - The County has a consistent policy of requiring either public open space or common areas dedicated for recreation or open space development, particularly in the Clearlake basin. Parks developed by the County range from 2,500 acres at the Highland Springs Recreation Area to a single acre at Lucerne Alpine Park on Clear Lake. There are presently seventeen such facilities located around Clear Lake and in the Highland Springs Recreation Area, Kelseyville, and in Middletown.

The State also has 560 acres in beaches and park land on Clear Lake as well as 3,440 acres in State forestry and 7,281 acres in State lands division. Other State lands comprise some 2,500 acres.

There are many trailer camps, campgrounds and picnic areas in the Menocino National Forest and in the Bureau of Land Management lands. These range from trailer camps, to campgrounds, combination trailer and campgrounds, picnic areas and hunting areas throughout the special areas in the Mendocino National Forest. There are also numerous areas in the Bureau of Land Management area.

Total visitor days for 1971 in Mendocino National Forest was 180,800 divided as follows:

1,200 visitor days for picnicking

101,000 visitor days for camping

46,900 visitor days at the 71 leased homesites in the area and 32,700 other types of visitor days. (Visitor days are 12 hour days under Forest Service rules). One hundred twelve new campsites were established within the last year at Lake Pillsbury.

2. Road and Public Land Abandonment

All public land should be carefully evaluated as to their relationship to the open space element and no right should be relinquished until the review indicates no open space values are involved.

3. Lease Excess Roads Lands from State

Section 14012 of the Government Code provides:

"the director may lease non-operating right-of-way areas to municipalities or other local agencies for public purposes, and may contribute toward the cost of developing local parks and other recreational facilities on such areas. The director may accept as all or part of the consideration for such lease or for such state contribution any substantial benefit the state will derive from the municipality or other local agencies undertaking maintenance or landscaping costs which would otherwise be the obligation of the State. Such leases shall contain a provision that whenever the leased land is needed for state highway operating purposes the lease shall terminate. The department is authorized to classify portions of state highway right-of-way as non-operating."

All property declared to be excess by the Division of Highway should be carefully analyzed to determine if a lease arrangement might be of benefit to the County.

4. Full Fee Acquisition

This is essentially the total acquisition of property by purchase, condemnation under the power of eminent domain, tax foreclosure or gift. The voluntary purchase agreement would mean paying the prevailing real estate prices; condemnation would also involve just compensation to acquire open space.

5. Less Than Fee Acquisition

Less than fee acquisition is different from outright purchase of property in that only certain property rights are purchased. The land ownership is a combination of rights to use the land, for example, the right to develop the land, the right to mineral exploration, and other possible mineral surface uses. In less than fee acquisition, only certain desired rights are purchased, such as the right to prohibit tree removal, road construction, or building structures.

Less than fee acquisition is, therefore, the purchase of a portion of a private land owners rights in order to retain or deter certain types of land uses. This could be an effective open space control.

6. Land Exchange

It is currently possible for governmental agencies to exchange public land for privately owned land for the purpose of obtaining needed open space in proper locations. As an example, The Bureau of Land Management can exchange land which is scheduled for exchange.

7. Purchase of Surplus Public Lands

Local agencies are often offered the opportunity to purchase surplus state and federal lands. A discount of 50% is usually provided if the land is to be used for parks and recreation purposes. Also, the Bureau of Land Management administers large amounts of surplus land which can be purchased at a very low price by the county or exchanged.

8. Deed Restrictions

Deed restrictions are often created by the private developer as one tool for controlling the type of development which might occur on that property. These restrictions might take the form of use restrictions, setback requirements, preservation of natural vegetation, architectural style, or other provisions which might add to the open space of the developing area.

D. Possible Methods of Financing Open Space

1. Taxation

Listed below are several examples of special taxes which might be utilized to gather revenue for open space acquisition if deemed necessary:

a. User Fees and Taxes - Within controlled and extensively used areas (such as parks and shorelines). A fee can be imposed upon a user to aid in the maintenance and development cost.

b. Motel "Bed Tax - By the use of a tourist overnight tax upon guest hotels and motels, large scale funds are available to finance programs which are constantly designed to draw the tourists in the first place.

c. Real Estate Transfer Tax - A minor tax can be imposed upon the transfer of real estate to be utilized for the development of open space and parks lands related to such real estate development.

d. Horse Tax - The acquisition of designated riding trails can be financed through a tax placed on riding horses and horse rentals as provided for in the article 14 of the Government Code under the Pleasure Riding Tax Law.

e. Gasoline Tax - A definite portion of the gasoline tax can be designated for scenic highway construction and beautification.

2. Federal Funds

a. HUD Open Space Grants - Although current funding of this program is oversubscribed, it does essentially provide fifty-fifty matching funds for acquisition of open space and park improvements. However, this program emphasizes open-spaces nearer to urban areas.

b. Land and Water Conservation Fund - This is a fifty-fifty matching fund program currently available for the purchase of open space lands.

c. Wildlife Restoration Fund - The acquisition, development and preservation of major wildlife areas are funded under this program administered by state wildlife conservation board.

d. Other federal funds are available under many minor programs for the maintenance and acquisition of open space lands.

3. Private Funds

Recently there has been a surge in the number of private conservation groups willing to purchase valuable open-space lands for the benefit of the community and the environment. This should be encouraged as an effective means of acquiring land that might otherwise not be obtainable through governmental action or as a holding action until governmental funds can become available.

PART 2

THE CONSERVATION ELEMENT

of the

GENERAL PLAN

LAKE COUNTY, CALIFORNIA

CONSERVATION ELEMENT

LAKE COUNTY

I. SUMMARY AND OBJECTIVES

The Conservation Element is defined in Section 65302(d) of the Government Code, it states that the Conservation Element is for the conservation and development and utilization of natural resources including water and its hydraulic force, forest, soils, rivers and other water areas, including harbors, fisheries and wildlife habitat. It also includes other wildlife habitat, mineral and other natural resources.

The plan may also cover such subject as:

1. Reclamation of land and waters.
2. Flood control.
3. Prevention and control of the pollution of streams and other bodies of water.
4. Regulation of land and stream channels and other areas required for the accomplishment of the plan.
5. Prevention, control, and correction of erosion of soils, beaches and shrubs.
6. Protection of watersheds.
7. Location, quantity and quality of rocks, sand and gravel resources.

Conservation and environmental issues are two types:

1. Those which are central and basic that they pervade nearly every functional aspect of conservation and resource management.

2. Those that relate more specifically to the following functional aspects:

- A. Land resources including forests, soils, wildlife, minerals, other natural resources, land and water reclamation, flood control, and erosion.
- B. Water resources which include all of the former and in addition water resources, rivers and lakes, flood control, water pollution, regulation in streams.
- C. Air resources which includes climatic resources, forests, soils, rivers and lakes, and fisheries, wildlife, minerals, other resources, land and water reclamation and erosion.
- D. Biological resources which include all of the elements under "A" Land Resources with emphasis on plant life and animal life.

Land resources as described above are one of the prime assets of Lake County. It is imperative that this resource be protected and that good conservation practices be employed throughout the county. The first objective of the Conservation Element is, therefore: To conserve and protect the land resources of Lake County.

Water resources are also important as an amenity of Lake County, as well as a source of potable and irrigation water, it also supplies a priceless recreational asset. The prime objective in the conservation of water resources is: To protect and conserve the lakes, streams and reservoirs of the county of potable and agricultural water, for recreation areas but more important as wildlife habitat which will be beneficial to the residents, present and future of Lake County.

Clean air of Lake County is also a priceless asset. Simply defined, air pollution is caused by release of waste into the air in a faster rate than the air can cleanse itself. Man is not solely responsible for air pollution, many substances contribute to what might be called "natural" pollution of the air including wind blown from soil, volcanic dust and ash, viruses, bacteria and spores. Major sources of air pollution and its contributions are roughly as follows: Automobiles 60%, industry 17%, electric power plants 15%, space heating 6%, and incineration of refuse 3%. The prime objective is to preserve the air quality of Lake County so that it will continue to be one of the prime assets of the County for both human and animal population.

The biological resources of the County include habitat or the preservation of fish and wildlife species, as well as plant life. The present environment of Lake County includes such habitat and preservation should have a high priority. The objective of this section is to conserve and maintain habitat for wildlife species and plant life.

The County presently has an Open Space Plan which has as its objectives the protection, preservation of open space, including agricultural lands, recreational lands and habitat for fish, wildlife and plant life.

The existing Lake County General Plans also include plans for proposed scenic highways and a Recreation Element, both of which recognize the importance of the conservation of the beauty of the County. Unfortunately, many of the human activities on the shoreline of the lakes and streams, as well as the mountain sides are

detrimental to the environment. The protection and conservation of the lakes, streams and mountain environment are an important objective of the present plans of the County, among the land resources of the County, agriculture must be considered the primary resource; however, there are other natural resources, such as an important potential source of geothermal power, carbon dioxide gas, chromite, manganese, quick silver, soda, and sulphur. The County also has a large supply of coniferous and hardwood timber distributed throughout the County in both public and private lands. The water resources of the County are necessities in an agriculture economy. It is also important that the increased sources of water be developed if the increase in tourists and second home population is to be provided for. The history of Lake County evolves around water; the County's economy was largely developed because of the waters of Clear Lake so that recreational potential is produced. Lake County has not up to this time developed adequate water to protect the future economy and amenities that make the County area a desirable place in which to live. At present there are three reservoirs on Lake County watersheds: Namely Clear Lake, Lake Berryessa and Lake Pillsbury. Much of Lake County water is used for other areas, such as Yolo County and Napa County. Steps must be taken to protect the County's watersheds so that additional water supplies would be available to Lake County from the valuable watershed areas. Plans must be made for the expansion and retention of water supplies for Lake County.

The Conservation Plan is a compilation of the foregoing statements indicating the objectives of the County to conserve and protect land, water, air and biological resources.

As in the Open Space Plan, there are a number of ways to implement the Conservation Plan - many of which are being utilized by Lake County with good results. These methods of implementation include:

1. Flood Plain Zoning: Primary and secondary flood plains districts are presently included in the County's Zoning Ordinance and some areas are so zoned.
2. Subdivision regulations which protect the County' resources through: Soils investigations, control of sewage disposal, approval of the source and quality of water, protection of wildlife habitat, both land and water, flood control regulations, mandatory setbacks from streams and lakes where septic tank disposal is proposed, control of erosion by planting and silt traps.
3. Open Space Plan and Recreation Plan: Plans for preserving open space through passive and active recreation areas maintained by Federal, State and Local govenment.

Private open space development has been encouraged and will add useable open space in the County through use of land for golf courses, hunting preserves, private campgrounds and other such uses.

II. CONSERVATION - GENERAL

A. State Conservation Element Requirements

As stated previously Section 65302(d) clearly sets forth the intent of the Legislature in adopting Conservation Element requirements. The Conservation Element must include a plan for the conservation, development and utilization of the following:

1. Water.
2. Forests.
3. Soils.
4. Rivers and Waters.
5. Harbors.
6. Fisheries.
7. Wildlife.
8. Minerals.
9. Other natural resources.

Components that are permissive as far as inclusion in the Conservation Element are:

1. Land and Water Reclamation.
2. Flood Control.
3. Water Pollution, prevention and control.
4. Regulation of the use of land in the stream channels and other areas.
5. Prevention, control and correction of soils, beaches and shores.
6. Protection of watersheds.
7. The location, quantity and quality of rock, sand, and gravel resources.

Section 65302(d) was amended to require that a conservation element shall be prepared and adopted no later than January 1, 1974.

That portion of the conservation element including waters shall be developed and coordination with any county water agency and with all district and city agencies which have developed, served, controlled or conserved water for any purpose for the county or city for which the plan is prepared.

B. Other Laws Related to a Conservation Element

There are currently many other laws which are directly related to conservation, they are as follows:

1. State Subdivision Map Act

Under the Subdivision Map Act the authority over design and layout of subdivisions is generally vested in local government bodies. Local government has the responsibility of approving tentative and final subdivision maps.

2. State Subdivided Lands Act

The Subdivided Lands Act, administered by the Department of Real Estate, is concerned with consumer protection. Before a developer can sell a subdivision lot, he must obtain a public report from the Real Estate Commission. This report informs prospective buyers about their rights and obligations, the provision, if any, that has been made for public utilities, warns of hazards, and provides other useful information.

3. Environmental Quality Act of 1970

The legislative policy and Environmental Quality Act of 1970 requires that it is the policy of the State to

"take all action necessary to provide the people of the State with clean water and air, enjoyment of the aesthetic, natural, scenic and historical environmental qualities, and freedom from excessive noise."

In addition it declares that it is the policy of the State to "create and maintain conditions under which man and nature can exist in productive harmony to fulfill both social and economic requirements of present and future generations."

In the implementation of this policy state agencies, boards and commissions, and local agencies are required to prepare and submit environmental impact reports on significant federal, state and local projects.

4. Office of Planning and Research

This office was established to assist in the formulation, evaluation, up-dating of long range goal and policies for land use, population growth and distribution, urban expansion, open space, resource preservation and utilization. Environmental goals and land use policy to be developed by this office will be a major step toward programming urban developments so as to protect the environmental quality in the state.

5. Land Conservation Act of 1965 (Williamson Act)

As stated in the Open Space Plan the Williamson Act was designed to aid land owners who desire to continue farming by establishing the value of farm land for assessment purposes at rates compatible with agricultural land values.

This is accomplished by local government designating agricultural preserves and entering into at least ten-year annually renewable contracts or agreements with the land owners to hold the land in agricultural pursuits.

6. Water Quality Control Act

The Porter-Cologne Water Control Act of 1970 charges the State Water Resources Control Board with protecting the quality of all state waters for the beneficial uses and enjoyment of the people. In discharging this responsibility the Regional Boards have the authority to establish waste discharge requirements. Through the exercise of this authority the size, location, density, design and construction practices of urban development are affected.

7. Fish and Game Laws

The State Fish and Game Code declares that the fish and game belong to the people of the State and charges the Department of Fish and Game with the responsibility for protection of these resources. In addition to regulating hunting and fishing, the Fish and Game Laws prohibit the destruction of fish and wildlife habitat.

These laws prohibit the pollution of the State's water by any material injurious to fish, plant or bird life. Sediment originating from any development would be considered such a pollutant.

Alteration of a stream or lake bed by public agencies or private individuals is prohibited until the the Department is notified and makes recommendations for

measures to protect fish and wildlife. The recommendations of the Department must be followed or disagreements submitted to an arbitrator. Vehicular crossings of stream beds are covered by this law

8. Soil Conservation Provisions of the Public Resources Code

Soil conservation districts, organized under Division 9 of the Public Resources Code, concern themselves with the prevention of erosion and control of water.

The Department of Conservation, acting through the State Soil Conservation Commission and the Division of Soil Conservation administers the Soil Conservation Program at the state level. Working through Soil Conservation Districts at the local level, the state also assists local agencies on soil conservation matters, conducts special studies on soil and vegetation problems, develops plans for local projects for soil and water conservation.

9. Forest Practice Division of the Public Resources Code

A permit must be obtained from the State Forester for the conversion of timber land for purposes other than growing timber, such as urban development.

Erosion control measures specified in Forest Practice Rules apply to timber land conversion permits for urban use. If logging takes place, periodic inspections are made by the California Division of Forestry to check on the operator for compliance with the Forest Practice Rules.

10. Fire Prevention Provisions of the Public Resources Code

The Public Resources Code defines hazardous fire

areas, restrictions on use, and minimum protection requirements, administration of which is carried out by the State Division of Forestry.

The Public Resources Code sets forth provisions for the reduction of fire hazards around buildings located on land which is covered with flammable material. A fire break of at least thirty (30) feet is required to be maintained around buildings by removing all flammable vegetation or other combustible growth. Additional widths of fire break may be required under extra hazardous conditions. Fire break clearance is also required around electric transmission poles and towers.

Burning in dumps as well as in other areas is regulated by permits issued by the State Forester.

Provisions must be made to control erosion in areas where vegetation has been removed for fire breaks.

11. Local Laws

The most important plans and ordinances that influence urbanization and its impact on conservation practices include the following:

1. General Plans.
2. Zoning Ordinances.
3. Subdivision Ordinances.
4. Grading Ordinances.

12. Federal Agencies

Federal agencies who's programs have the most significant relation to the impact of urbanization of lands are:

1. Soil Conservation Service (USDA).
2. Environmental Protection Agency.

Soil Conservation Service

The Soil Conservation Service of the U.S. Department of Agriculture provides information and technical assistance to private land owners in soil conservation districts and state and local entities. While the assistance has been primarily concerned with the erosion control and agricultural land use through state-organized soil conservation districts, the Soil Conservation Service does assist local government in reviewing from a soil standpoint, county subdivision plans and proposals as well as other types of development.

This agency makes basic soil surveys and provides soil maps which should be the foundation of local land use plans. In addition, generalized interpretive maps are provided showing critical areas of soil erosion, soil shrink-swell behavior, land capability, suitability for septic tanks and many other interpretations that are useful.

Environmental Protection Agency

The urgency for cleaning up streams, lakes and other water areas requires more finances than the local agency's area will provide. The Federal Water Pollution Control Act provides funding for projects important to environmental aspects of urbanization.

Through the Environmental Protection Agency, communities can get financial help in the construction of municipal waste treatment plants with a federal grant of at least 30% of construction costs. The federal share may

be higher under certain conditions, such as when more quality standards in comprehensive basic compliance have been developed.

C. The Need for Conservation

Extensive urbanization is occurring throughout many areas in Lake County. There are substantial numbers of subdivisions being approved both in the Clear Lake Basin and the mountain areas throughout the County each year. There is also evidence of substantial amounts of land being developed by lot splitting.

Frequently natural resources are not adequately considered in determining the suitability of land for urban type development and in regulating development. This results in detrimental impacts on the soil mantle and the vegetative cover and other environmental factors. Problems are created not only at the site of the development but also in adjacent areas.

To prevent further degradation of the environment, legislation and administrative actions are necessary at both the State and local levels. Local government must develop and implement improved techniques to effectively plan and regulate development of lands within the County and to protect the soil mantle and vegetative covering.

Conservation means:

1. To identify, to assess, and quantify the impact of urbanization on the soil, vegetation and related environmental factors.

2. To educate the public on the environmental

consequences of urbanization throughout the County through documentation of facts and illustrate methods of preserving environmental amenities.

3. To identify and assess Federal, State and local regulations and their enforcement as they relate to impacts of development on the environment.

4. To make regulations which would minimize the detrimental impact of development on soil and vegetation.

5. To encourage erosion control techniques which local agencies may employ to prevent or minimize erosion.

D. Apathy to Conservation Practices

As described in the Open Space Plan, today, the flow of metropolitan areas are to the more rural counties. Governmental policies have not encouraged conservation practices; therefore, urban sprawl, the automobile and the influx of people have caused detrimental environmental impacts.

Major factors of urbanization causing environmental impacts are:

1. Removal or damage of vegetation on construction sites.
2. Grading of land for homesites, roads and utilities.
3. Alteration of natural drainage patterns.
4. Creation of impervious surfaces by construction of roads, parking areas and homes.
5. Pre-emption of land use.
6. Introduction of people and vehicles.

7. Disposal of solid and liquid waste.

Detrimental environmental impacts from urbanization are:

1. Accelerated erosion and sedimentation.
2. Loss of vegetable cover.
3. Polluted water.
4. Loss of fish and wildlife habitat.
5. Over-use of recreational areas.
6. Diminished surface water.
7. Reduced ground water recharge.
8. Increased flood hazard.
9. Diminished grazing and timber lands.
10. Greater fire hazard.
11. Lack of access to public lands, streams and lakes.
12. Intensified air pollution.

There is considerable opposition to establishment of strict environmental and conservation practices because they run counter to providing areas for urban developments and excessive concentration of people in the foothill and mountain areas.

E. Coordination with Other Agencies

It is an absolute necessity that the various departments of Lake County coordinate their planning decisions. It is also an absolute necessity that Lake County coordinate its decisions with other levels of government. Coordination is important with the U. S. Forest Service, the California Division of Forestry, the U. S. Soil

Conservation Service, and with the County-wide Water Agency and with all District and City Agencies where the question of water is involved.

F. Coordination between the City and County

Although the County government is responsible for all unincorporated lands, it should also be its responsibility to serve as a recommending and coordinating agency in conservation matters. The City will ultimately establish its own Conservation Element but close coordination between the City and County will result in the framework of harmonious conservation practices close to and near the Lakeport City Limits.

III. CONSERVATION AND ENVIRONMENTAL CONSIDERATIONS

The following conservation and environmental considerations were researched and analyzed in the Open Space Plan as a basic foundation upon which the Open Space Plan was designed, they can serve as the foundation upon which conservation and environmental plans are designed. Items of major significance are included in this section of the Conservation Element of the General Plan for Lake County.

A. The items of major significance discussed in the Open Space Element and page numbers of subject matter and maps are as follows:

<u>Item</u>	<u>Subject Matter Page No.</u>	<u>Map Page No.</u>
Climate	15	--
Geology	15	40
Topography	16	17
Soil Types	18	22
Soil Classes	--	26
Vegetation	21	28
Natural Resources	29	30
Hydrology	34	33
Hazard Lands	35	37
Fish, Wildlife & Natural Habitat	38	--
Existing Public Land	41	43
Crop Suitability & Agricultural Land	42	46
Grape Growing Area	44	45
Generalized Land Use	--	47
Agricultural Contracts	--	48
Recreation & Park Land	49	53

B. Inter-relationship of Conservation & Environmental
Considerations

All relevant considerations have been summarized in this section of the Conservation Element. By topic, each component of the natural and human environment has been explored and analyzed in terms of its relationship to conservation and environmental requirements as well as planning open space needs. It is necessary at this point to restate the fact that although each consideration is unique and can be studied independantly, they must now be tied into workable systems of conservation and environmental necessities which will result in a functional Conservation Plan. The following are recommendations and coordinations of these independant solutions put into a Conservation Plan.

IV. CONSERVATION PLAN

This section is composed of all major factors of conservation, all of which link together to form a Conservation Plan. After each factor is discussed, the final Conservation Plan appearing at the end of this section results in a combination of putting the factors into a coordinated Conservation Plan.

A. Agricultural Conservation Plan

The agricultural lands of the County occupy 31% of the total land in the County. However, fruit, nut and field crops excluding pasture land occupy only 9% of the County area. Approximately 15,000 acres of farm land is irrigated, yet agriculture is the second greatest source of income. Not only is agriculture important to the County, but to the State and the Nation.

The income from agriculture in 1971 was nearly \$13,000,000 which is an increase of over \$2,213,000 over the 1970 figure. There are approximately 15,000 acres of irrigated land in the County and 235,000 of non-irrigated land including 170,000 acres in pasture lands. The Class 1 lands rated are the best cultivable land; deep soil is located westerly of Lakeport and in the Big Valley area on both sides of Highway 29 and the area around Kelseyville. Class 2 lands which are also good cultivable land with minor erosion or drainage problems is located in the Upper Lake area and the valleys nearly as far north as Horse Mountain and additional area west of the Class 1 land which were previously stated west of Lakeport. There are additional lands on the southeast side of Lakeport along

Highway 20 and 53 as well as a large amount of Class 2 land in the Middletown area and east of Middletown along Highway 29.

A total of 20,000 acres were zoned exclusively for agriculture since 1968. Not all of this area is in prime agriculture land. A continuing increase in population, second home development, highways and other urban uses is a continuing threat to the retention of agricultural land for agricultural purposes. With the advent of second home development, and tourist oriented facilities, the safeguarding of agricultural lands is as essential as the protection afforded other types of land use.

Objective:

Preserve and protect the prime and productive agricultural lands and the agricultural economy of Lake County.

Recommendations:

1. Prime agricultural land, wherever possible, should be separated and protected from other uses, and only those uses related to agriculture should be located on prime agricultural lands.

2. Agricultural uses should be encouraged as a means of providing open space and conserving prime land.

3. Agricultural lands which are used for grazing and other purposes although not considered prime soils, should be given equal protection.

4. Prime agriculture land must be recognized as an equal to other major land uses and given the protection

it deserves as a developed use and must be permanently and exclusively reserved and recognized as its highest use in both public and private interests.

B. Recreational Land

Recreation, in Lake County, runs the complete gamut - from the local neighborhood playground, to major regional parks and campgrounds, drawing visitors from 250 miles away. The scenic beauty of Lake County must be guarded. The County has been fortunate in its many natural attributes - its scenic shoreline along Clear Lake and the rivers and streams in the County ranging from lakefront beaches to rugged mountain streams. The County is fortunate too that over 351,915 acres of these lands are owned and controlled by the Federal Government, most of which is open to the public for a vast variety of recreational purposes. The State of California also has acquired over 13,824 acres for public use and enjoyment. Park and recreation facilities outside of Federal and State lands including City and County park lands are over 2,900 acres, the largest of which is the Highland Springs Recreation Area of 2,500 acres. These open space lands meet a great variety of public outdoor recreational needs from picnicking in the various Federal and State camping areas or on the shores of Clear Lake to camping in the forest lands in the National Forests in the northern end of the County to fishing on the lake or in the streams or hunting in the mountain areas. Whatever the outdoor recreational needs, Lake County has the open space for it; the largest concern is expansion of facilities

for recreationists in that open space.

More parks, campsites, picnic areas and other forms of recreational facilities will be required, not only to satisfy increasing population but also the increasing amount of leisure time and the influx of tourists.

Increasing care must be taken to retain the natural beauty of Lake County. All proposed recreational facilities will be carefully implemented to allow maximum use without damage to the environment so that future generations will be able to enjoy existing amenities.

Objective:

To reserve land for recreational facilities, encourage private recreational development and other open uses in categories characteristic and beneficial to the present and future residents of Lake County as well as to meet tourists needs today and in the future.

Recommendations:

1. Provide for the orderly development and control of a comprehensive recreation system for Lake County.
2. Recreational resources should be protected for the future as these resources are largely irreplaceable natural assets.
3. Encourage or provide recreational facilities and other open uses in central locations near all living and working areas in areas of outstanding beauty sufficient to meet the varying needs of the people to be served.

4. Encourage proper commercial recreation uses to augment public recreational programs.
5. Sites for recreation should be evaluated to assure they have maximum flexibility and adaptibility to the constantly changing recreation needs and interests.
6. The development of waterfront property should be encouraged for all suitable types of recreational uses to meet the needs of local, regional, statewide residents.
7. The river areas which provide the best recreational attraction should be preserved.
8. Recreation areas should take advantage of multi-purpose lands, such as reservoirs, flood plains and forest lands.
9. Encourage the development of a system of scenic highways by establishing special architectural sites and landscape control in a visual line control, thereby preserving areas of outstanding scenic quality.
10. Provisions should be made for adequate number of campsites, picnic areas, overnight camping facilities, scenic turnouts and roadside rests.
11. Provisions should be made for riding, hiking and bicycle trails on local as well as statewide programs.
12. To meet the demands of future populations advantage should be taken of the perspective areas of sufficient size and locations for parks, and other similar uses in proper locations. A minimum standard should be set for the amount and quality of land devoted to recreation.
13. The continuing development of major recreational

facilities to serve regional and statewide residents should be encouraged on public lands throughout the county including Federal, State and County.

14. The development of major recreational and other related uses should be provided for by private enterprise, and at all governmental levels including the City, County and Federal agencies.

15. Encourage private recreational development as a major supplement to public recreation facilities.

C. Wildlife Habitat

An environment which includes a variety of wildlife is an enjoyable place for people to live. Unfortunately many animals have become selected as endangered species due to people; the invasion of development into wildlife habitat is, of course, the source of the problem. As their natural habitat is encroached upon, animals are confined to smaller and smaller areas. Preservation of habitat is the key to the maintenance and well being of all fish and wildlife species.

Lake County has numerous wildlife species, some of which are still abundant. Federal, State and County owned open space land assure the continued natural habitat in these public areas. Control of access to prohibition of vehicles in the mountain and wilderness areas preserves the natural environment necessary for wildlife to exist.

Objectives:

To preserve and maintain streams, lakes and forest open space as a means of providing natural habitat

for species of wildlife.

Recommendations:

1. To maintain all species of fish and wildlife for their intrinsic and ecological values as well as for their direct benefit to people.
2. To provide for diversified recreational use of fish and wildlife.
3. Provide for an economic contribution of fish and wildlife in the best interest of the present and future populations.
4. Provide for scientific and educational use of fish and wildlife.
5. When planning any alteration to the present environment or habitat, consideration should be given to the effects on fish and wildlife.
6. Present land uses which result in siltation, pollution of inland waters should be carefully monitored, and if necessary, corrected to assure clean and productive habitat.
7. Outstanding wildlife habitats and sites that have unusually high value for fish and wildlife should be carefully considered before any development altering this environment is permitted.
8. Encourage development and enhancement of wildlife habitat through careful use of methods such as controlled burning, planting, judicious livestock grazing, mechanical land manipulation and creation of ponds in water courses.

9. Recognize and encourage the various appropriate and non-appropriate uses of wildlife. This includes such activities as scientific studies, educational purposes and hunting and fishing.

10. Retain and develop access to public areas through riding (non-motorized) and hiking trails.

D. Natural Resource Lands

The primary natural resource in Lake County is agriculture. In 1972 agricultural products contributed \$12,991,950 to the economy.

Other than agriculture, the basic natural resources plays a minor role in the economy of the county. In comparison to other forest areas, the commercial forest land acreage in Lake County is small. Accordingly, there is only a small amount of timber harvested annually. Similar to logging activities, mining also plays a minor role in the economy of Lake County. One potentially great boost to the economy of the county is the possibility of geothermal development throughout the southern portion of the county. Current trends indicate that the existing commercial forests should be retained as a natural scenic resource and harvesting be kept to a minimum.

The long range Timber Management Plan for the orderly harvest and perpetuation of Boggs Mt. State Forest timber stands which proposes certain logical and specific steps to bring Boggs Mt. timber stand under productive sustained yield based on volume and growth data is a good example of conservation planning and forest management after many

years of fires and logging dominated by economic considerations by private owners.

The county also contains many natural geologic features which provide scenic interest and are a great attraction to tourists. Conservation of these natural resources is necessary to continue to attract visitors to Lake County.

Objective:

Protect the scenic natural resources of Lake County and preserve areas which are important as commercial natural resources for future generations.

Recommendations:

1. To preserve areas of natural scenic beauty as areas of active and passive recreation.
2. Conserve lands which provide a valuable source of geothermal power for potential future use.
3. Continue to promote a program of agricultural land preservation to assure adequate food supply for the future.
4. Maintain prime forest lands in timber production under multiple use concept. Recreation and subdivision development of forest lands should be carried out in an orderly manner with high standards for environmental protection.

E. Scenic Lands

In Lake County, the entire county is considered as scenic land. Whether it is the agricultural lands westerly of Clear Lake and in the southerly part of the county with

its fruit and nut trees and grapevines, the mountainous areas in the north and west including Hull Mountain at 6,873 feet in the northwest corner and Snow Mountain at 7,040 feet in the northeast corner or Cow Mountain on the west border of the Clearlake Basin which rises to 3,924 feet or further south Cobb Mountain at 4,722 feet, Lake County provides a tremendous variety of scenic interests. Although approximately 370,000 acres of this scenic land is preserved by various public agencies for recreational purposes, many other parts of the county must be protected to retain its scenic beauty.

California's highways in Lake County should be designated as scenic highways in the State of California. The areas which these highways bisect are of great scenic interest, for the most part, and should be protected by zoning regulations controlling setbacks and setting building restrictions to retain the natural beauty along these highways to the greatest possible extent.

The Mendocino National Forest is a scenic asset of great value. As mentioned in other parts of this report, it serves as a natural habitat for many species of wildlife; it is a recreational area for thousands of people a year and provides the county with a portion of its watershed and water conservation resource. Many of the hundreds of campsites are located in that portion of the Mendocino National Forest located in Lake County. These campsites are located along the creeks and streams as well as Lake Pillsbury.

The County Board of Supervisors and the Planning Commission have adopted zoning and subdivision regulations designed to preserve the beauty and quality of environment in Lake County. Building and grading regulations have also helped to retain the County's scenic beauty. Policies in regard to landscaping of cut and fill slopes for road and highway construction and building pads have been adopted and used. The need of requiring planning of cut and fill slopes and hillside building construction is recognized but further regulations and enforcement for this type of maintenance must be adopted.

Objective:

To conserve, preserve and maintain the scenic lands of Lake County.

Recommendations:

1. Continue to work for the conservation of Lake County's scenic beauty.
2. Develop plans for acceptance of state highways as Official State Scenic Highways and county roads as Official County Scenic Roads.
3. Encourage private developers, utilize conservation methods of using the land. Discourage development on steep slopes unless special techniques of construction are used.
4. Develop and apply zoning and building regulations designed to preserve the scenic areas of the county.
5. Protect agricultural lands as a major open

space resource.

6. Encourage private reforestation of hillsides to enhance the beauty of the county.

7. Adopt regulations requiring the landscaping and maintenance of vegetation on all cut and slope fills.

8. Prohibit encroachment of excessive cut and fill slopes into corridors along scenic highways.

F. Watershed and Water Recharge Lands

Lake County is generally mountainous, with valleys trending northwestward. The steepest elevations are in the north-Hull Mountain, 6,873 feet, in the northwest corner, and Snow Mountain, 7,040 feet, in the northeast. Cow Mountain, the west border of Clear Lake Basin rises to 3,924 feet on the Mendocino County line; Cobb Mountain, to the south is 4,722 feet. The county slopes to the southeast, with an elevation of 1,105 feet at Middletown; and approximately 700 feet in the valleys of Cache Creek and Putah Creek as they flow southeast out of the county.

Rains extend from October through April. Seasonal averages range from 22 inches at Clear Lake Park to 45 inches at the Bartlett Mountains east of Clear Lake, and 65 inches on Cobb Mountain to the south. The highest precipitation normally occurs in November through February. This large amount of potentially usable rainfall results in heavy, intense runoff. Lake County is divided into three major watershed areas: The Clear Lake-Cache Creek Basin draining easterly into Yolo County, the Putah Creek Basin which drains southerly into Napa County and the

upper main Eel River Basin which drains northwesterly into Mendocino County. The water service areas within these basins are designated the Clear Lake Basin, the Middletown-Coyote Valley Area, and the Upper Eel River Basin.

Clear Lake has been used for many years as a reservoir for storage of water for irrigation in Yolo County. This water is also used extensively for recreation purposes. The Clear Lake Basin has three distinct agricultural areas which are Big Valley, the Upper Lake Area including Scotts Valley and Bachelor Valley, and the Lower Lake Area. The firm water yield of the ground water basin of the Clear Lake Basin is estimated to be about 20,000 acre feet per year. Pumped diversions from Clear Lake by local residents with riparian water rights amount to about 3,000 feet per year of additional firm supply. The total effective firm supply of water presently available for irrigation use at the farmhead gate, and for municipal industrial use amount to about 35,000 feet per year in Clear Lake Basin.

The firm water supply in the Middletown-Coyote Valley Area from groundwater and from Detert and McCreary Reservoirs, amount to about 6,000 acre feet a year; not quite adequate to meet today's needs.

The Upper Eel River in northern Lake County includes all of the Eel River drainage basin within the county. Due to extreme seasonal fluctuation, the Eel River does not offer a significant firm water supply for the area. Water demands in the area, however, are minimal and additional development of surface supplies probably will not be

required to supplement the present spring and groundwater supplies.

Lake Pillsbury owned by the Pacific Gas and Electric is operated to provide some regulation of Eel River flows at the Van Arsdale Diversion Dam and Potter Valley Power House. These are the primary water sources which serve as water recharge supplies by releasing relatively constant amounts of and also provide valuable irrigation water for the agricultural areas of the county.

Demands in Clear Lake Basin for water are expected to be about 90,000 acre feet per year in the year 2020 with a corresponding supplemental demand of nearly 61,000 acre feet per year. Additional dams and reservoirs will have to be constructed in order to have sufficient storage capacity to meet this demand for agriculture and for the urban population of the county. Total water demands for Middletown-Coyote Valley will be about 1,600 acre feet per year in the year 2020.

Care must be taken to keep the present supply of usable water at a quality which is safe for human use and free from long range pollutants. Every effort must be made to keep agricultural runoffs, industrial and human waste from lowering the water quality below permissible standards.

Objective:

To preserve the quality of the existing water supply in Lake County and adequately plan for the expansion and retention of valuable water supplies for future

generations and to provide for a comprehensive program for sustained multiple use of watershed lands through reduction of fire hazards, erosion control and type-conversion of vegetation where desirable and feasible.

Recommendations:

1. Provide for the safety and welfare of the residents of the county by flood control efforts on a regional scale.
2. Continue to assure the high quality of water within the county by emphasizing programs which stop intrusion of agricultural waste into the water supply.
3. Every precaution must be maintained to eliminate the danger of any pollution to the streams and lakes as well as recharge areas through human and industrial waste and agricultural runoff.
4. Continue a program research into the future water demands of Lake County to establish the need for any future facilities.
5. Promote a plan for future expansion of water storage reservoirs to be utilized as water supply as well as recreation.
6. Utilize latest scientific techniques towards reclamation and recycling of waste water.
7. Use of watershed lands for urban or second home purposes should be permitted only under rigid controls.

G. The Plan

The foregoing sections are general discussions of the various facets of the Conservation Plan. Each are

combined in broad categories in the Conservation Plan for Lake County. This Plan as well as the texts and maps comprising the conservation element is only one part of the Lake County General Plan and should be considered in relation to the open space element and the other elements of the General Plan.

Although this element of the General Plan is to discuss conservation, it recognizes that areas must be set aside for human settlement consistent with realistic growth projections.

Adequate land has been set aside for urban expansion, including residential, commercial and industrial growth and steps have been taken to direct this growth to some extent. Adequate conservation practices must be used in all development of urban areas.

Easements and right-of-ways for public utilities, power transmissions, transportation are necessary for future population but their intrusion on natural landscape should be held to a minimum and good conservation practices must be observed.

The Conservation Plan in the county can only be achieved by complete cooperation by all levels of government, City of Lakeport and the various districts. There is a great need to devise over-all environmental management goals for the County and the City of Lakeport by both short and long term policy and positive actions at all levels of government and the private sector. It is essential to develop goals which will include conservation

practices which have meaning for the people of the County and which includes larger Regional, State-wide and National interests. The role of the County is to coordinate with those branches of the State and Federal governments operating within the County and to require top conservation practices from the private sector. The attainment of good conservation practices and environmental management objectives will depend in most cases on the degree to which the County is able to influence the activities of the private sector since it is not feasible or desirable to have all lands which are significant for conservation and environmental resources management in public ownership.

The Conservation Plan in the County may be implemented in many different ways. Some methods are included in the Open Space Plan which includes scenic easement agreements, open space agreements, agriculture preserves, as well as outright dedication of lands for open space or recreational use. The U.S. Forest Service and the State Division of Forestry practice sound conservation and environmental management as well as providing broad expanses of open space for public enjoyment. Both Lake County and the City of Lakeport have a great responsibility to use sound conservation practices in all public work projects and encourage the private sector to likewise respect the environment.

Recreation development, second home development or extension of urban areas must be guided in several directions.

It is necessary to:

1. Protect the physical environment, which now means that we must return it to its natural state insofar as possible and practical.
2. Reduce the threat to life and property by geologic hazards.
3. Insure the most effective and beneficial use of land and its natural resources.
4. Prevent pollution of water, air and land.
5. Reserve area conservation and development of the natural resources.
6. Reserve prime agricultural lands for continued use in that category.
7. Reserve land with scenic beauty.
8. Recognize the great advantages to be derived from our natural environment.

Objectives:

1. Retain the character and natural beauty of Lake County by sound conservation practices.
2. Retain agricultural lands for its prime purpose.
3. Protect and conserve natural areas worthy of special consideration.
4. To plan for mineral production and performance so as to avoid destruction, pollution, or degradation of surrounding land and of water and air resources. After mineral extraction has been completed, land used for mineral production should be revegetated and restored to its original site condition.

5. To provide a comprehensive program to sustain multiple use of watershed lands through reduction of fire hazards, erosion control of burned-over lands, and type conversion of vegetation where desirable and feasible. Use for urban or second home purposes should be permitted only under rigid controls.

6. To identify all geologic and soil areas and develop standards for restricted development of these areas.

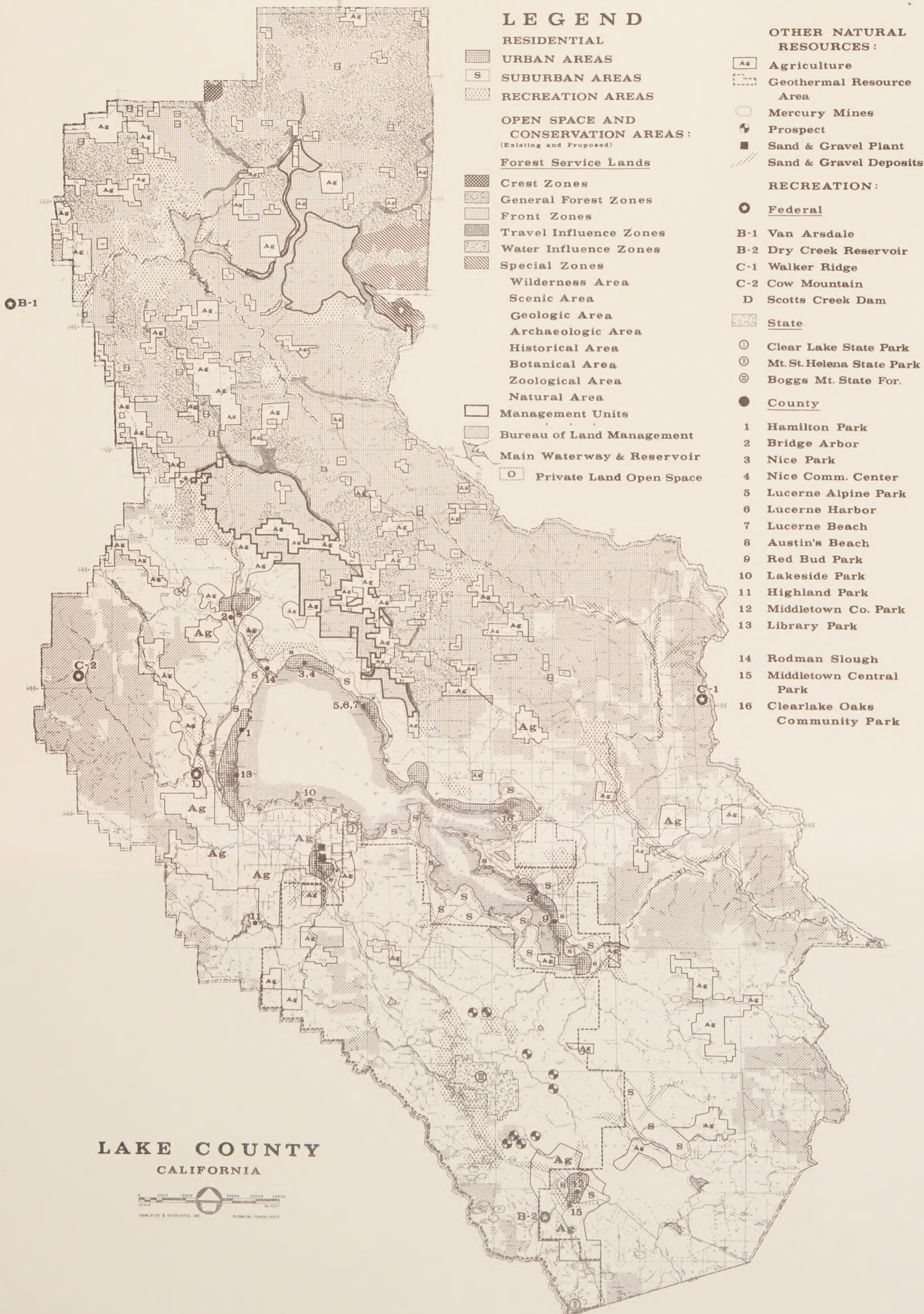
7. Adopt a policy to prevent encroachment of development onto unprotected flood areas or flood plains, and insure their continued use for agriculture, recreation or wildlife habitat.

8. To encourage recreational facilities which will provide open space at all governmental levels.

9. To encourage both the Federal and State government to retain open space in national forests, state forests and Bureau of Land Management areasq

A Conservation Plan is illustrative only and it is obvious that there are over-lapping interests in the various designations shown. It is also obvious that the Conservation Plan and the Open Space Plan are inter-dependent. The plan illustrates those areas which are presently under management of the various governmental agencies as well as private lands under special categories. These and other details were more completely discussed throughout the text.

CONSERVATION ELEMENT



V. IMPLEMENTATION OF THE CONSERVATION PLAN

A. Need for Conservation Plan Implementation

Emphasis has been made throughout this report of the great benefits that can be gained from a vital and active conservation and environmental program. A plan for conservation and environmental management will remain just a paper plan unless there is a willingness to make the plan work in both the public and private sector.

The following statements highlight some of the current practical methods, of the effectuating Conservation Plan which should be carefully evaluated as to the practicality program. Other methods should be carefully considered and utilized.

B. Implementation of the Conservation Plan and Results

The following methods have been attempted and found to be quite successful, if implemented with good conservation practices and environmental management. It is recommended that these be continued and enlarged.

1. County Zoning and Subdivision Regulations, General

These two forms of regulatory mechanisms give the County and City of Lakeport the power to promote the public health, safety, morals and general welfare. The powers are essentially the result of the realization of the importance of the whole community's rights being more valuable than the right of an individual in doing what he wishes with his land. Zoning and subdivision regulations are the primary methods of determining what and how the land may be used.

a. Zoning Regulations

(1) Exclusive Agricultural Zoning

Since 1968 the county has been engaged in an active and relatively successful effort to protect its highly productive land through an exclusive agriculture program which has been calculated as an implementation of the county's total planning program. It continues to be the county's position that agricultural zoning must continue to play an important role in the protection of agricultural lands. This, backed by firm policy, can be an effective tool which cannot be overlooked in accomplishing the desired goals set forth in the open space element.

Results - To date there has been 11,439 acres set aside in the exclusive agricultural zoning classification.

(2) Flood Plain Zoning

Flood plain zoning is a necessary provision to assure permanent open water channel in flood prone areas. As a result of strict flood plain regulations for building, open space is virtually assured.

Results - Lake County has adopted flood plain zoning regulations which have been applied to Scott Valley.

b. Subdivision Regulations

1. Subdivision regulations help to guide the development of land which is not yet a part of the urbanizing pattern. Specific subdivision regulations effectively guide development by the control and placement of transportation systems and utilities where they do the least damage to the environment. The regulations can also require open space and recreation lands to be set aside as part of the development. The regulations can also provide for the protection of valuable wildlife habitat whether in water areas or on land.

The County Subdivision Ordinance adopted in 1971 has adequate provisions to allow good conservation practices and environmental management.

The County Subdivision Ordinance as adopted also has a provision to provide for optional design so that wildlife habitat can be preserved and hazard areas may be avoided in the development of such subdivisions.

Results - The County is requiring new development to provide for either private recreational facilities, private recreation facilities held in common or open space land held either for the benefit of the persons in the development or dedicated to the public. County is also requiring development to protect

wildlife habitat and other unusual scenic areas which are for the benefit of the public as a whole.

2. Land Preserves with Tax Incentives

The Land Conservation Act of 1965 (Williamson Act) establishes that property tax incentive to private land owners who agree, by contract, to keep their land in agricultural use for 10 years. After the contract is signed with the county involved, the property owner agrees to keep his land in agricultural use and is taxed on the income from his property and not the speculative market value of that land. This enables the property owner to resist the pressures of premature development through high tax rates.

Briefly stated, the basic reason behind the Conservation Act is to reduce urban sprawl, premature development of agricultural land and thus protecting the agricultural economy.

Its fundamental long range benefits would include a reduced need for schools, roads, utilities and particularly governmental services that uncontrolled sprawl inevitably brings. Most important, of course is the great amount of productive open space that is provided.

It is necessary, however, to point out that to be successful the implementation of this program must be based on community and county goals for in the preservation of agricultural and open space land.

The program was not designed to simply lower taxes, and contracts should be entered into only when the agricultural committee can be shown that there is a positive community benefit.

Results - The county has entered into this program after appointing an agricultural committee to screen the applications and after establishing the following evaluation procedure:

Although a variety of open space land is worthy of protection, such as crop land, scenic land, scenic corridors, grazing land and watershed areas, the county feels that only prime agricultural land or productive crop and grazing land should be considered in regards to establishing agricultural preserves.

Application for establishment of an agricultural preserve should not be considered unless the parcel or group of contiguous parcels to be included in the preserve contains 40 or more acres and shall have an

actual gross income during three of the last five years from the production of animals and/or unprocessed vegetable plant products. In the case of recently improved lands, they shall have potential gain in the succeeding year of producing a gross income from the production of animals and/or unprocessed plant products.

The following criteria for consideration was adopted by the county:

- a. That contracts be executed for minimum ten year period and shall be automatically extended at the end of each year.
- b. That all agricultural preserves be covered by exclusive agricultural zoning - minimum acreage of 40 acres.
- c. That school district tax equalization program be recommended to the State Legislature as a companion feature of this program.
- d. That the Planning Department review all applications in consort with the agricultural committee on the basis of the County General Plan.
- e. That the Board direct the Agricultural Preserve Committee to develop the administrative procedures to implement this report.

f. That the application shall include a statement to determine if the applicant's property is included within a soil bank.

Since Lake County's entrance into this program in 1968, 38,702 acres have been covered by contracts. Exclusive agricultural zoning and contracts cover 50,141 areas.

3. Scenic Easements

Section 51050 of the California Government Code establishes that "any city or county which has adopted a General Plan may accept grants of open space easements or open space agreements on privately owned land lying within the city or county".

The purpose of such easements is for the preservation of land as open space in the best interest of the State, City or County and is important to the public for the enjoyment of scenic beauty, for the use of natural resources, for recreation, or for the production of food or fiber and specifically that its potential is for future generations.

The State presently has an open space reimbursement program (Section 14112, Open Space Subvention Act). The County should investigate this program and determine the best way to proceed in initiating open space agreements within the County.

Results - The Planning Commission is currently considering the requirement of dedications of scenic easements along County roads designated as Scenic

County Roads.

The following guidelines are suggested for review and acceptance of scenic easements:

- a. A substantial portion of the property must be within site of a public road, park or other significant open space which is in the ownership of the State, County or other public agency.
- b. Its relationship to adjacent parcels under scenic easement should be considered and its proximity to other areas of scenic community value should be determined.
- c. The impact of reduced tax revenue on the County should be evaluated.
- d. The land must have true scenic beauty to have some community value.
- e. The compatibility of the parcel with the General Plan should be evaluated.
- f. The possibility of any portion of scenic easement land being required for County or State highway purposes or for any other purpose that might require condemnation.
- g. Compatible uses that may be allowed on scenic easement lands. Uses that may be considered are those that will not mar the landscape, such as cattle grazing or riding and hiking trails.

Where scenic easements are accepted they shall be:

1. Dedicated for a period of not less than ten (10) years and shall be irrevocable during that period.

They shall be automatically extended at the end of each year.

2. Existing dwelling units on the property must be removed from scenic easement boundaries.

C. Other Conservation Implementation Possibilities

1. Public Ownership

In Lake County over 51% of the County's land area is owned by governmental agencies. The Federal Government owns 43.8%, the State owns 1.7% and the County owns the balance. Most of the Federal land is contained in the Mendocino National Forest and Bureau of Land Management. These figures do not include the 41,000 acres under Clear Lake owned by the State.

These jurisdictions should continue to acquire those lands which are significant to each one's level of responsibility. If it is really the intent to preserve open space, there must be a total mobilization of effort by all agencies and all levels of government. For only through the pooling of concentrated action can we hope to be effective.

Results - The County has a consistent policy of requiring either public open space or common areas dedicated for recreation or open space development, particularly in the Clear Lake Basin. Parks developed by the County range from 2,500 acres at the Highland Springs Recreation Area to a single acre at Lucerne Alpine Park on Clear Lake. There are presently seventeen such facilities located around Clear Lake and in the Highland Springs Recreation

Area, Kelseyville, and in Middletown.

The State also has 560 acres in beaches and park land on Clear Lake as well as 3,440 acres in State forestry and 7,281 acres in State Lands Division. Other State lands comprise some 2,500 acres.

There are many trailer camps, campgrounds and picnic areas in the Mendocino National Forest and in the Bureau of Land Management Lands. These range from trailer camps, to campgrounds, combination trailer and campgrounds, picnic areas and hunting areas throughout the special areas in the Mendocino National Forest. There are also numerous areas in the Bureau of Land Management areas.

2. Soil Conservation, U.S. Department of Agriculture

In Lake County the representative of the Soil Conservation Service sits with the Planning Commission in an advisory capacity to advise the Commission in the field of soil, water and natural resource conservation. The Soil Conservation Service supplies basic soils information to the Commission with field maps in areas where field surveys have been completed.

Soils survey information can and should be used as a basis of all types of land use planning. Since there are many types of soil that react differently under varying conditions, treatment required to protect and properly use them differs from soil to soil.

Soils survey prepared by the Agency, with interpretive tables can be used by health officials for approval of sewage systems and by engineers and designers for approval

of land fills and as an indicator of soil problems from the standpoint of footings, slip problems, flood proneness and other related soil conservation service.

The Soil Conservation Service provides technical assistance to the Planning Commission on conservation practices, in the application of these practices as the basis for sound land use and to eliminate as much as possible erosion, sedimentation and dust if the soils are not properly treated or planted.

Soil Conservation Service feels that proper land use management and planning is one of the best ingredients to improve the quality of the environment.

Some of the areas of environmental concern in which the Soil Conservation Service can provide technical assistance in Lake County through working arrangements with East and West Lake Resource Conservation Districts include: Review of County construction division plans, assisting with roadside and highway plantings, giving technical assistance in soil and water conservation; assistance to schools in conservation planning for outdoor classrooms; aiding the City and County to develop broad based open spaced land use plans.

3. Environmental Impacts

It is the responsibility of the Planning Commission and legislative bodies of the County and of the City to exert control over public works projects and private development in controlling the following:

- (1) Erosion and sedimentation.
- (2) Vegetative cover.
- (3) Pollution of water, air and land.
- (4) Loss of fish and wildlife habitat.
- (5) Diminished surface water.
- (6) Reduced ground water recharge.
- (7) Reduced storage capacities in reservoirs.
- (8) Increased flood hazards.
- (9) Diminished cover and timber lands.
- (10) Diminished prime agricultural lands.
- (11) Eliminate or reduce possible fire hazards.
- (12) Plant communities.
- (13) Separate access to public lands, streams and lakes.

Major Factors of Urbanizing Which Cause Environmental Impacts

1. Removal or damage of vegetation on construction sites.
2. Grading of land for homesites, roads and utilities.
3. Alteration of natural drainage patterns.
4. Creation of impervious surfaces by construction of roads and homes.
5. Pre-emption of land use.
6. Introduction of people and vehicles.
7. Disposal of liquid and solid waste.

There can be beneficial environmental impacts. They may be achieved through proper planning and design of urban development. They will lead to plans and designs that can reduce flood, and erosion hazards, minimize reduction or disturbance of wildlife and increase recreational opportunities and most of all conserve the natural resources of the County.

Acknowledgements

The Resources Agency, State of California

Division of Forestry
Division of Mines & Geology
Division of Oil & Gas
Division of Soil Conservation Service

U.S. Forest Service

District Ranger - Upper Lake
District Ranger - Willos

Bureau of Land Management

U.S. Soil Conservation Service

Department of Agriculture

Lake County Farm Advisor

Lake County Public Works Department

Department of Fish & Game

References:

Lake County General Plan

Land Use, Recreation, Economic Element

Lake County Overall Economic Development Plan

Forest Service Multiple Use Plan

Forest Service Handbook

Forest Service Guidelines

Report & General Soil Map

Lake County - Soil Conservation Service - U.S.
Department of Agriculture

Sand & Gravel in California - Division of Mines

Geologic Map of California - Division of Mines

California Fish & Wildlife Plan - California

Department of Fish & Game - Resources Agency

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